

201080" E220001

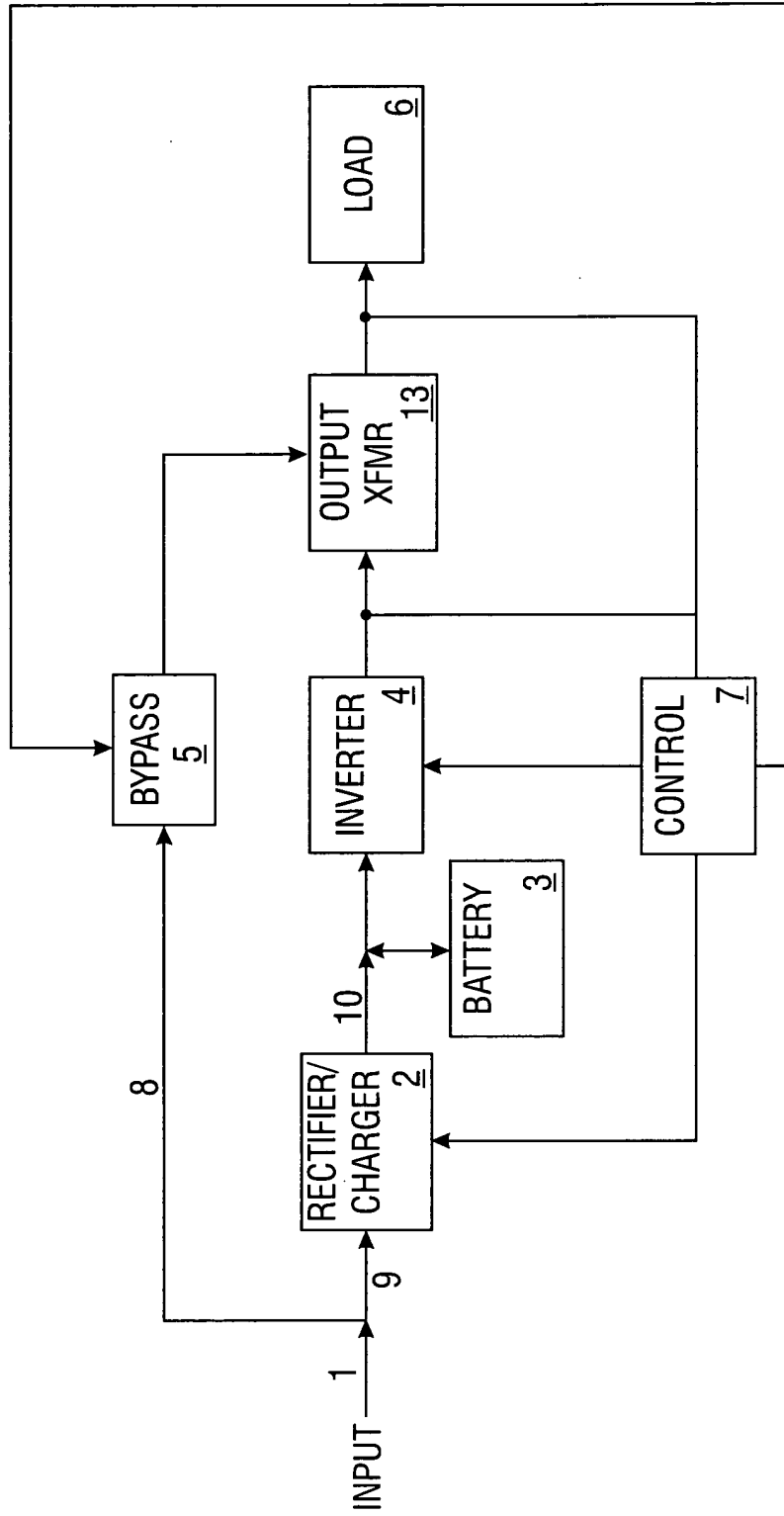


FIG. 1



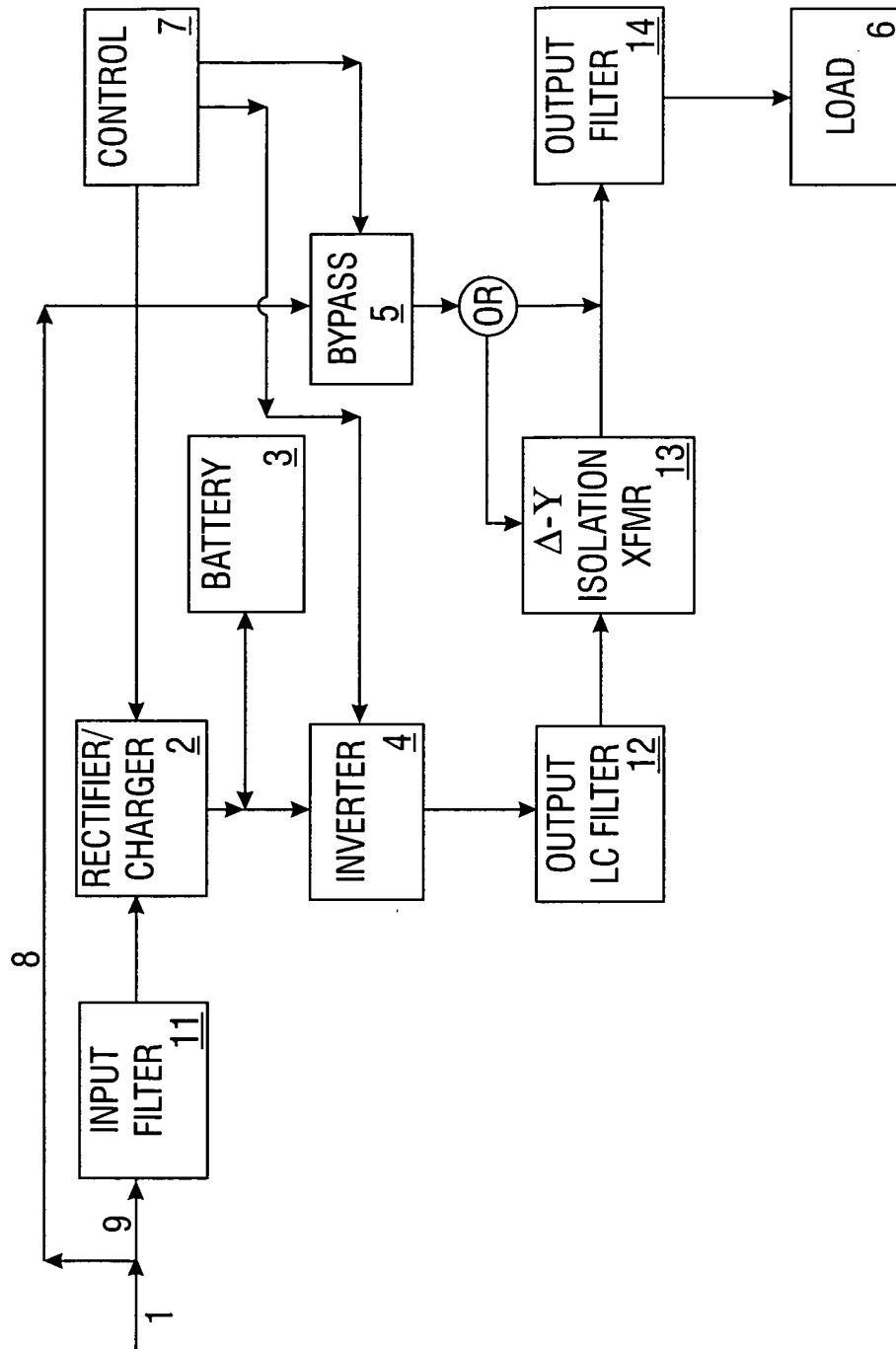


FIG. 2



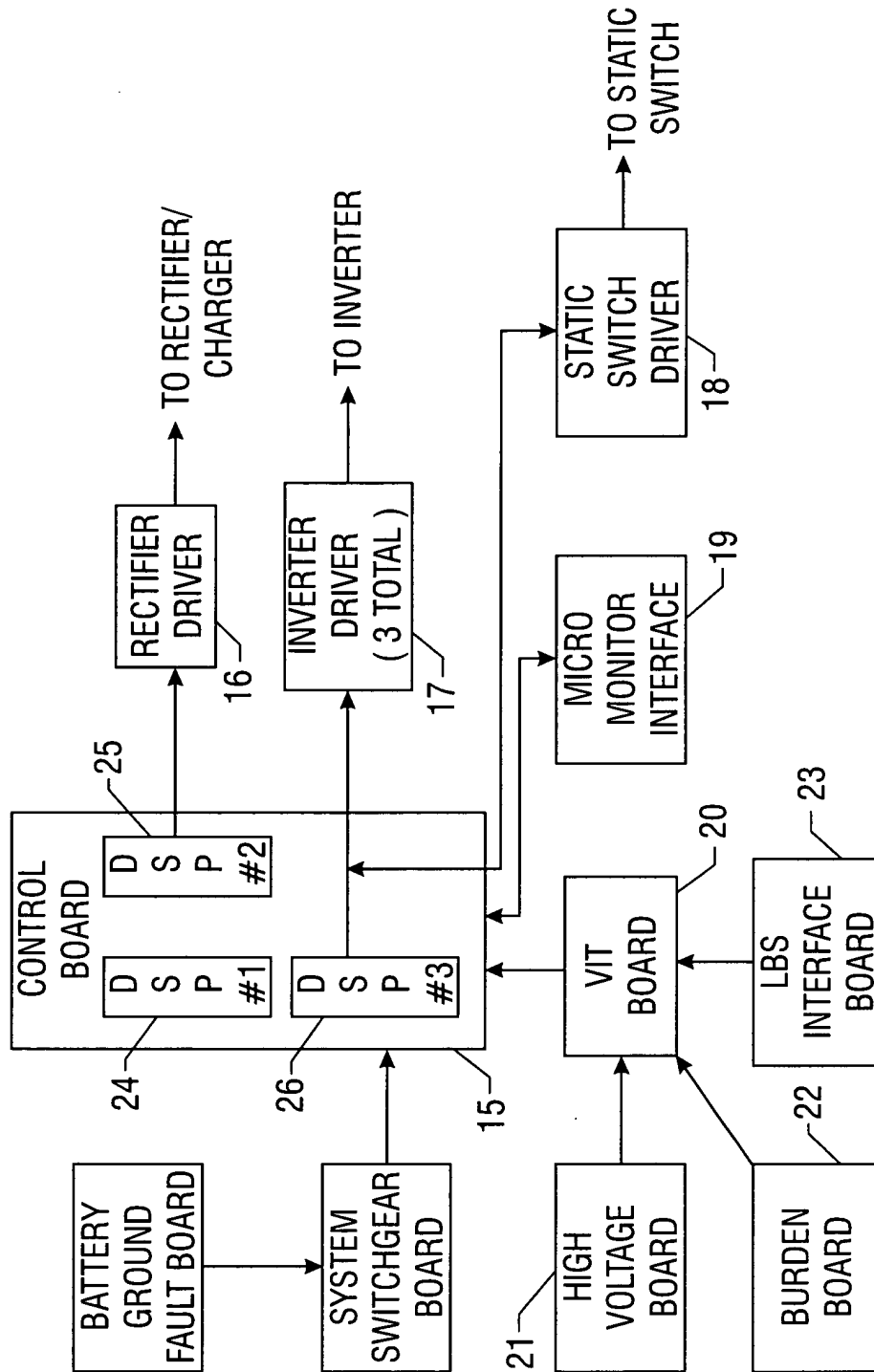


FIG. 3

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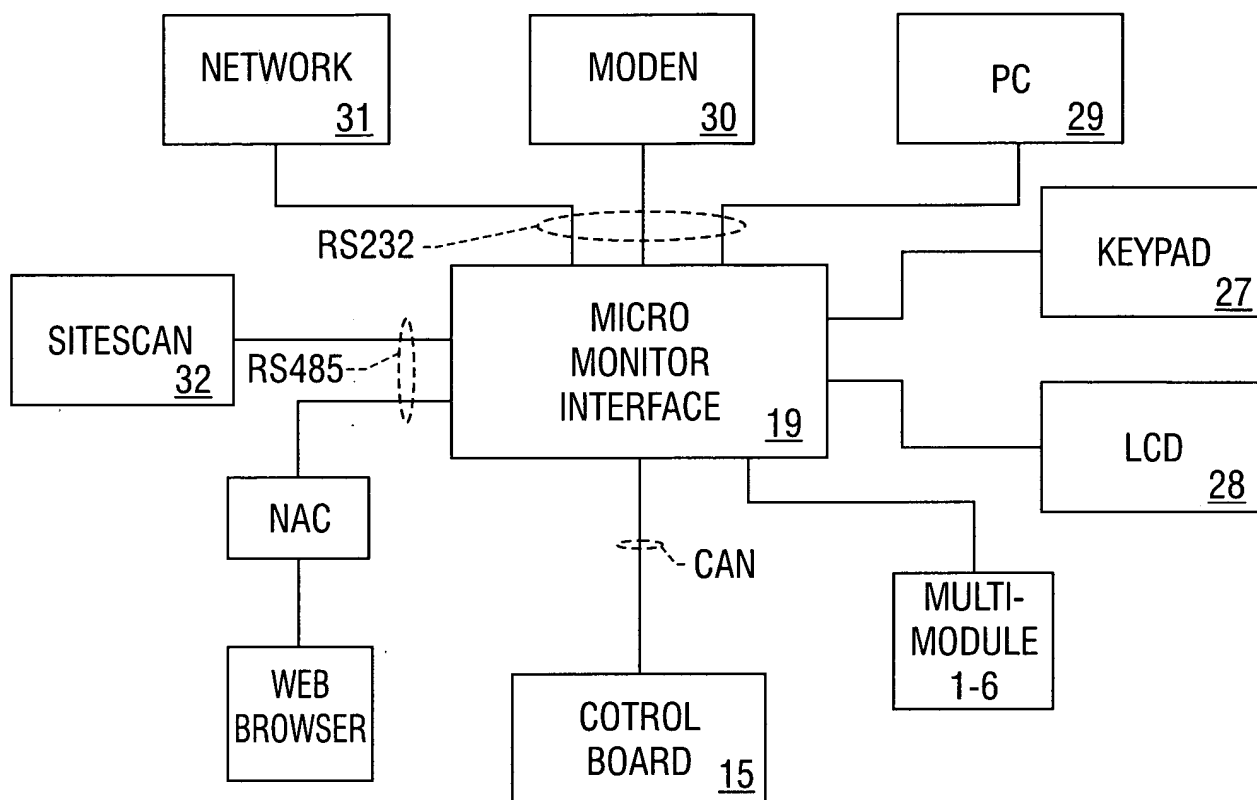
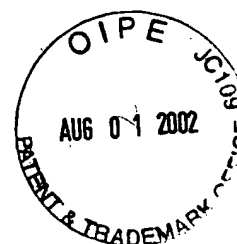


FIG. 4



20070727 080402

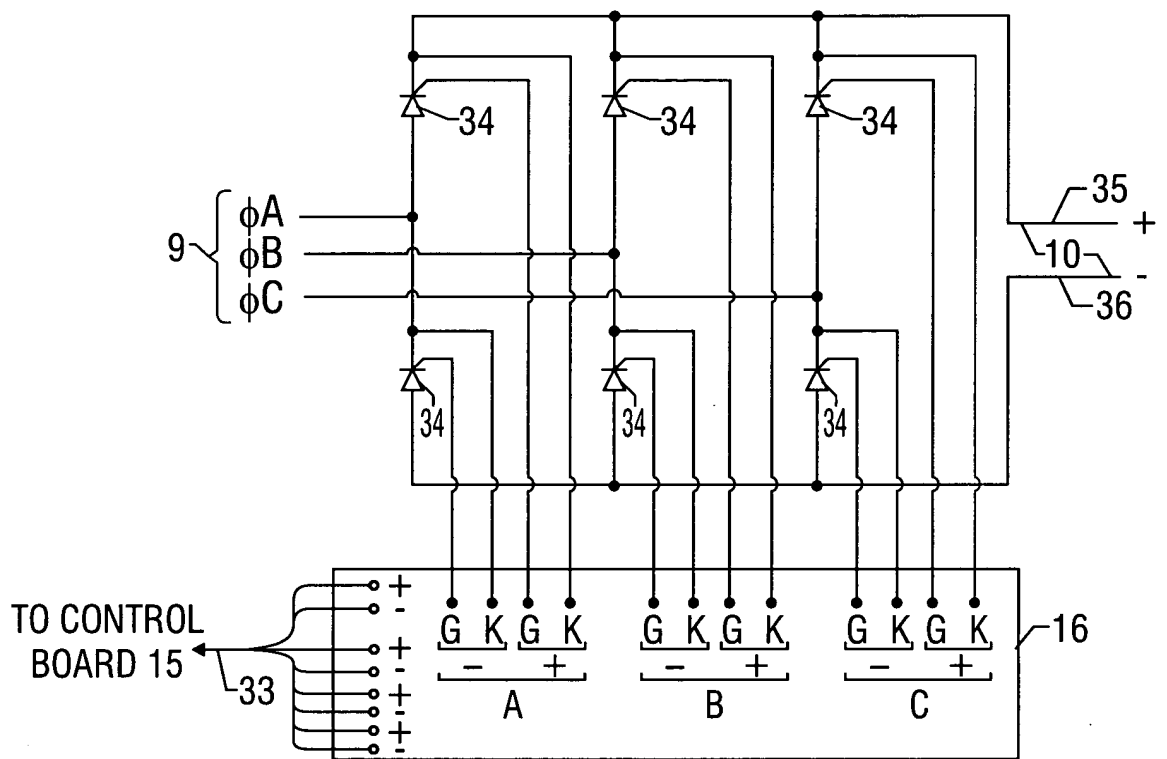


FIG. 5



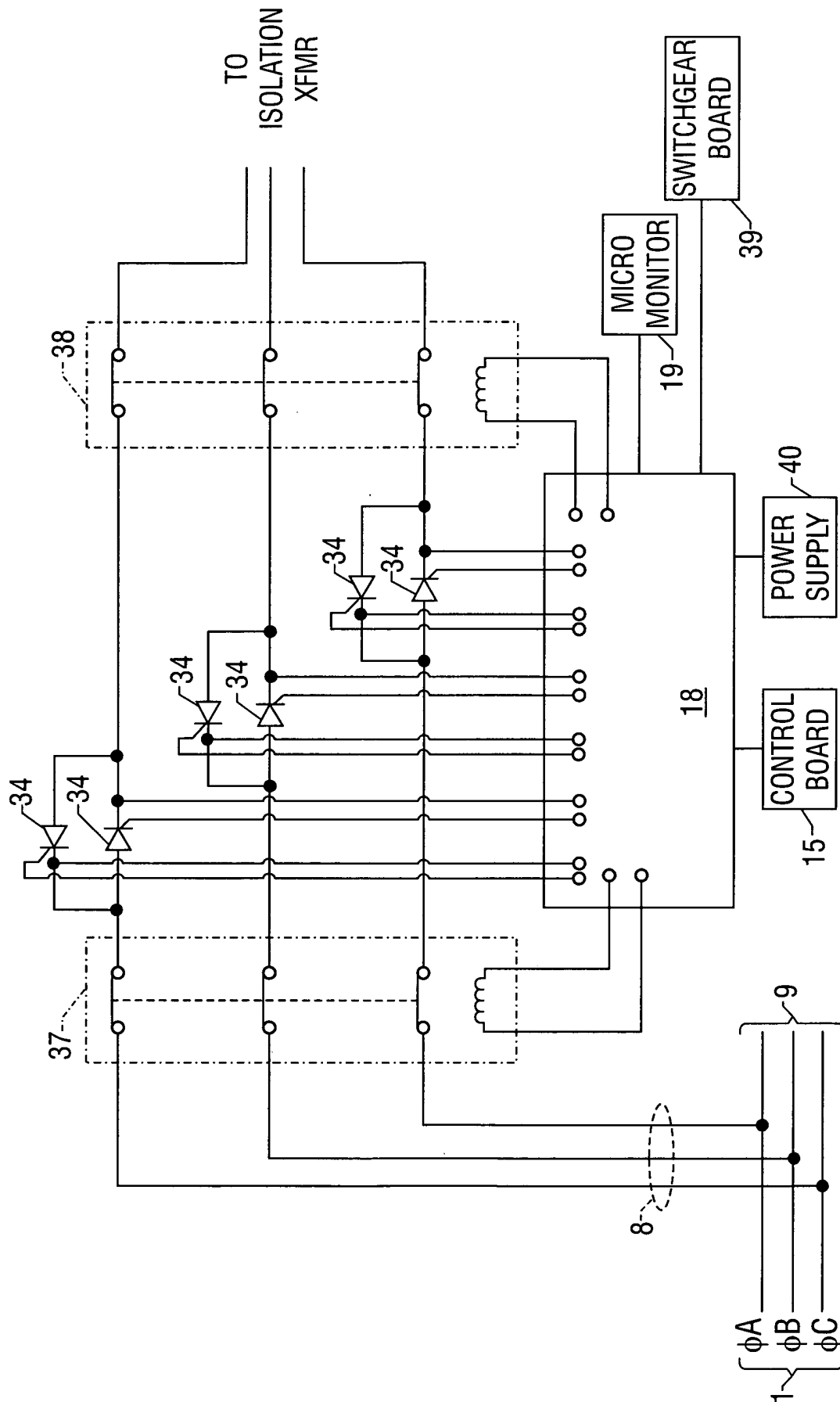


FIG. 6



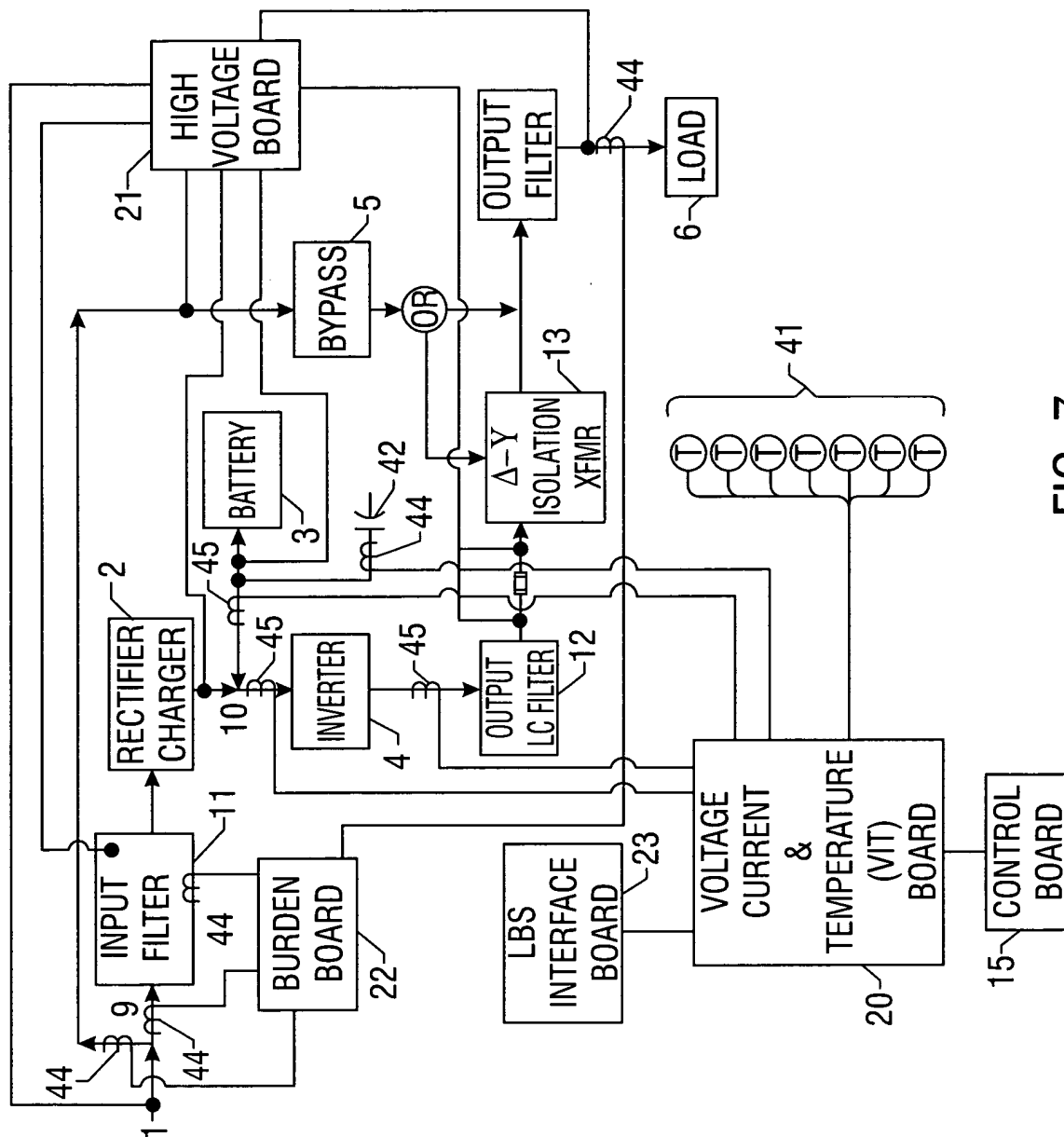


FIG. 7



10007273.080102

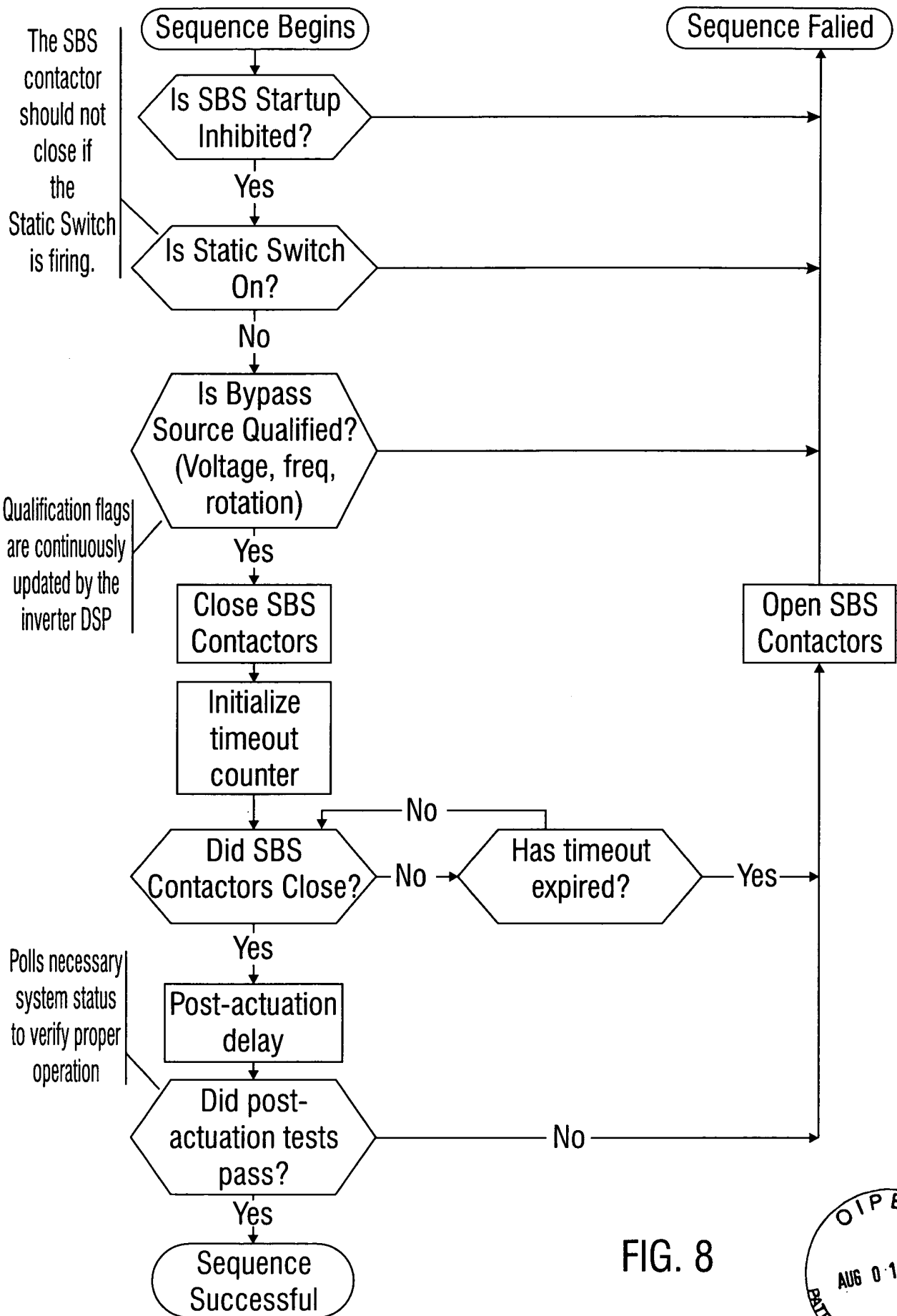


FIG. 8



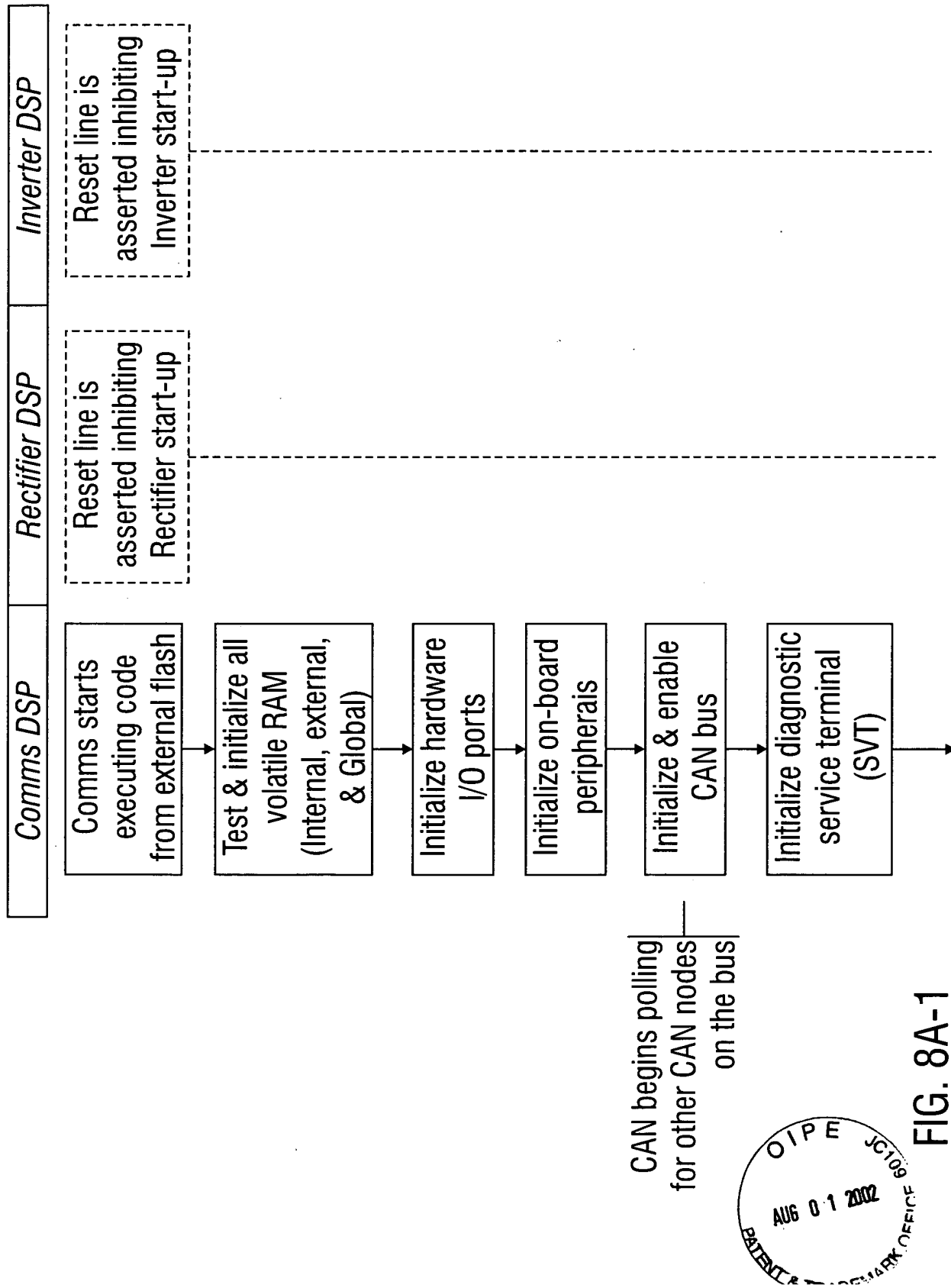


FIG. 8A-1

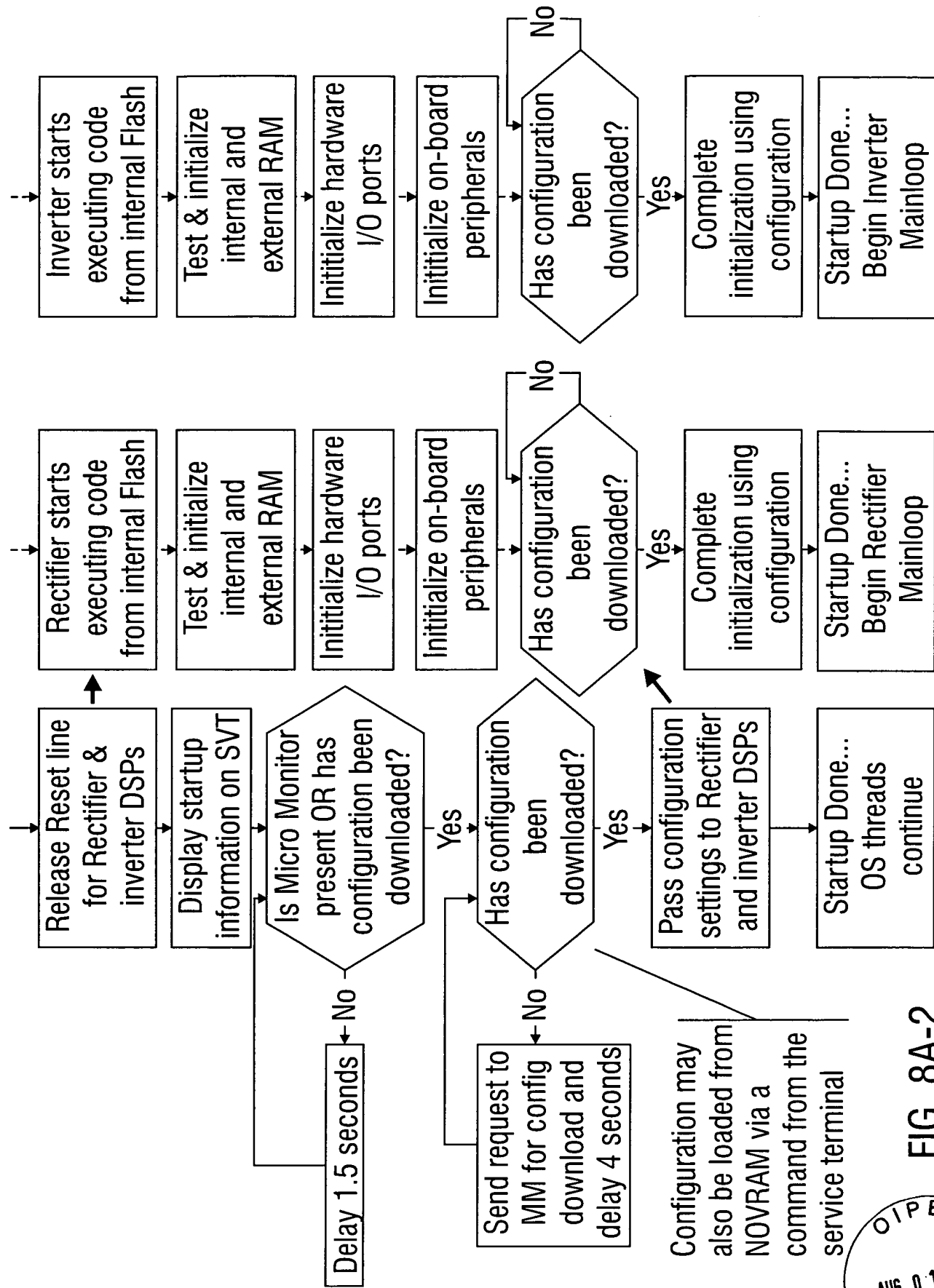


FIG. 8A-2



2010807273.080102

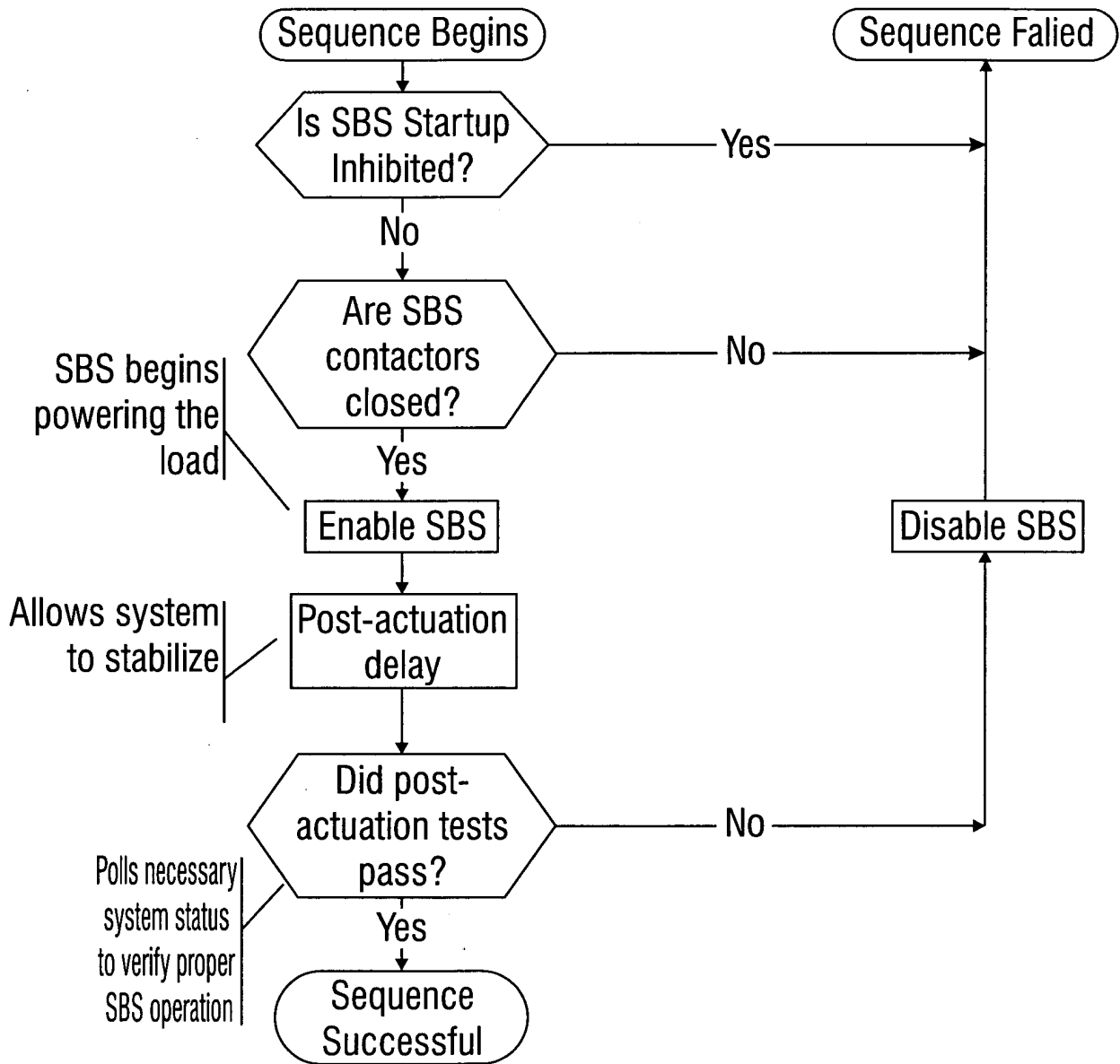


FIG. 9



10007273-080102

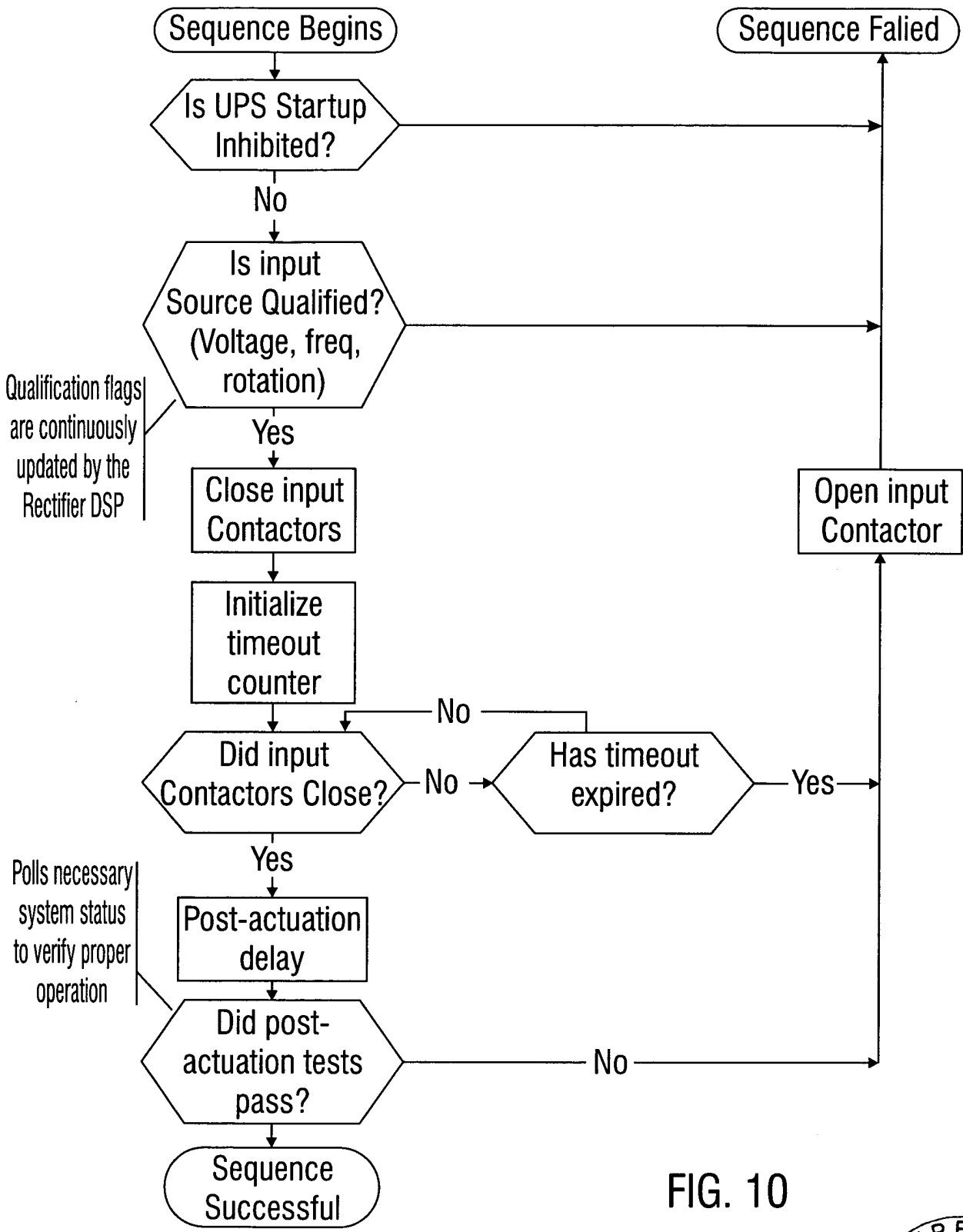


FIG. 10



10007273.080402

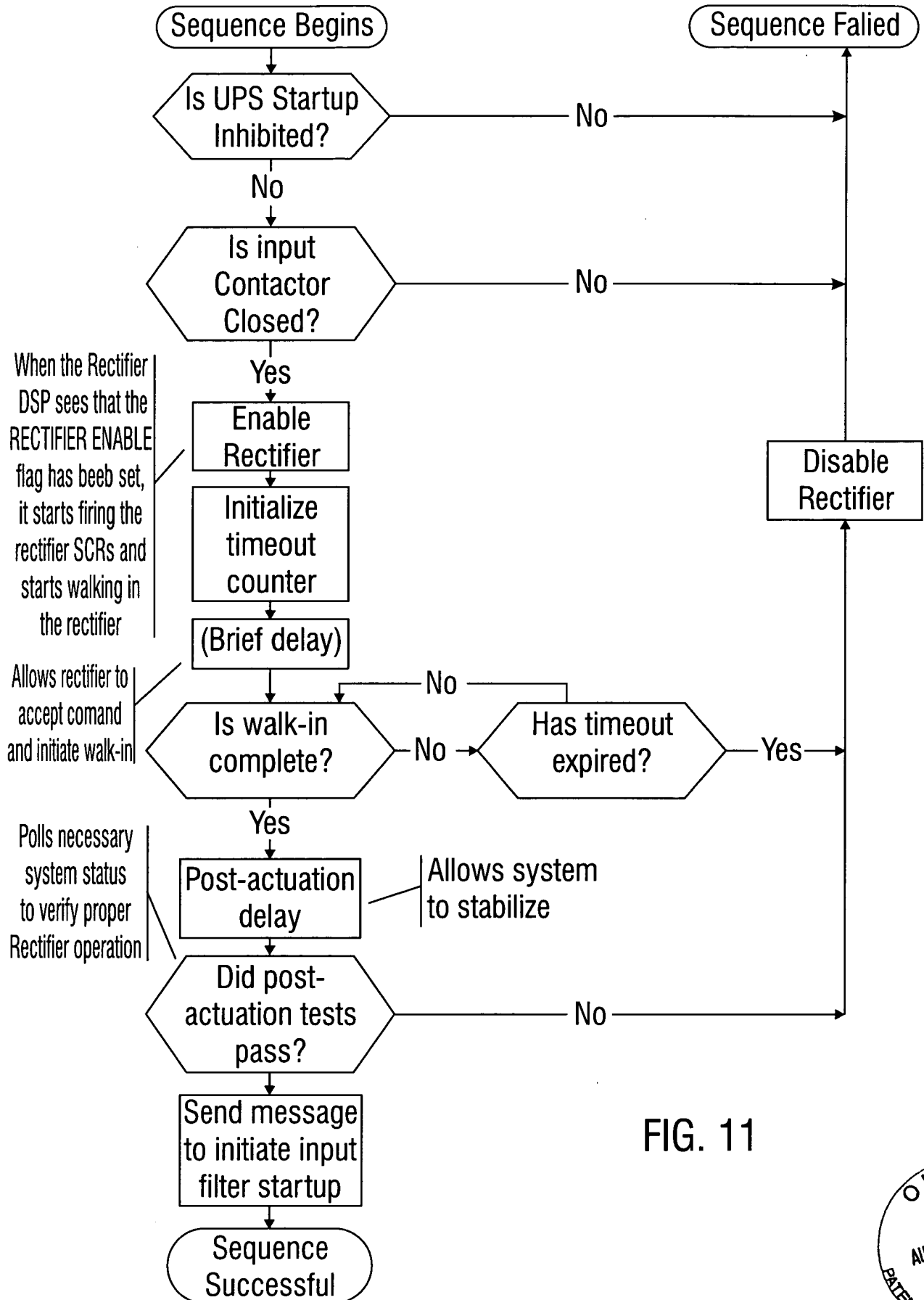


FIG. 11



2010300220007

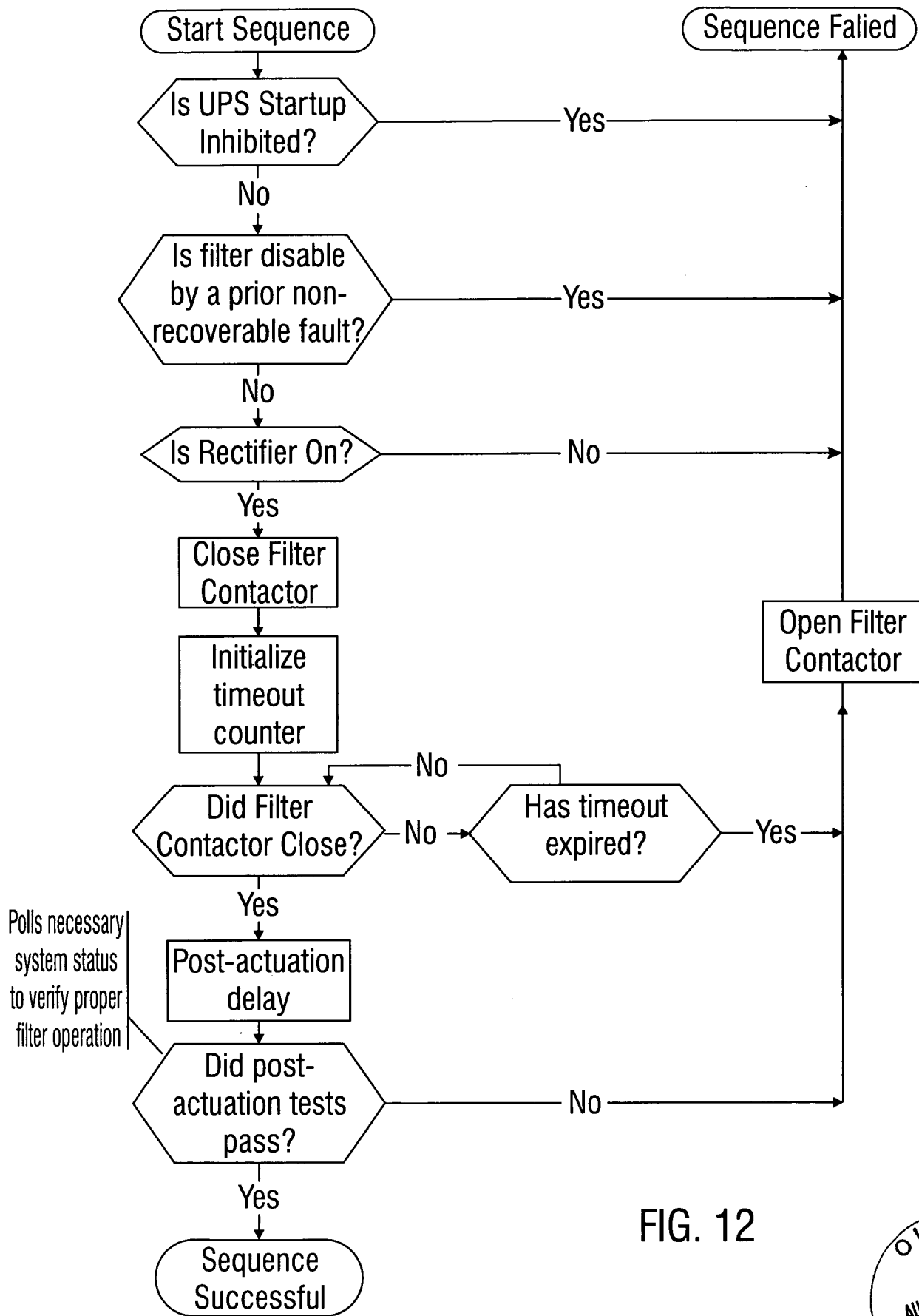


FIG. 12



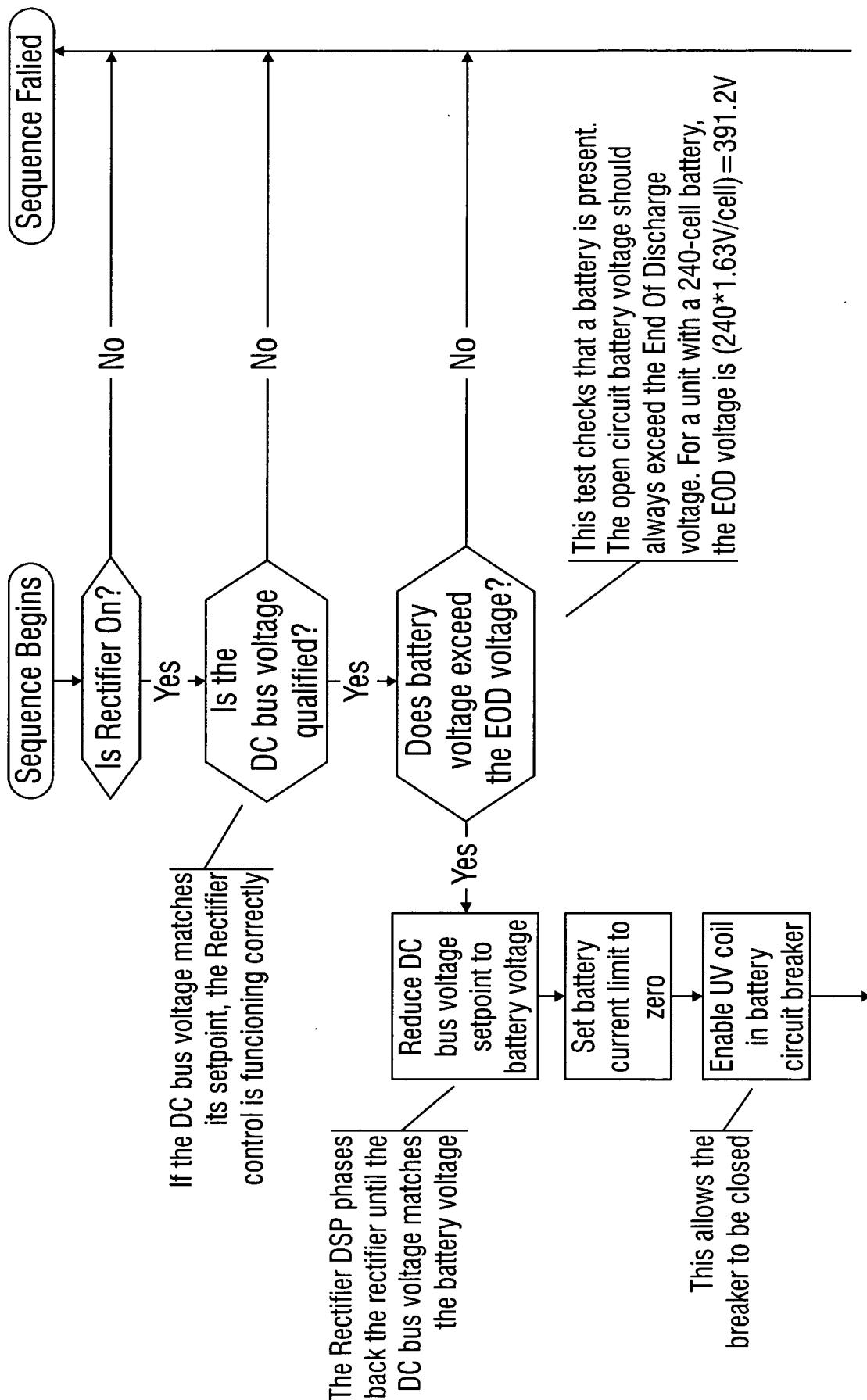


FIG. 14A



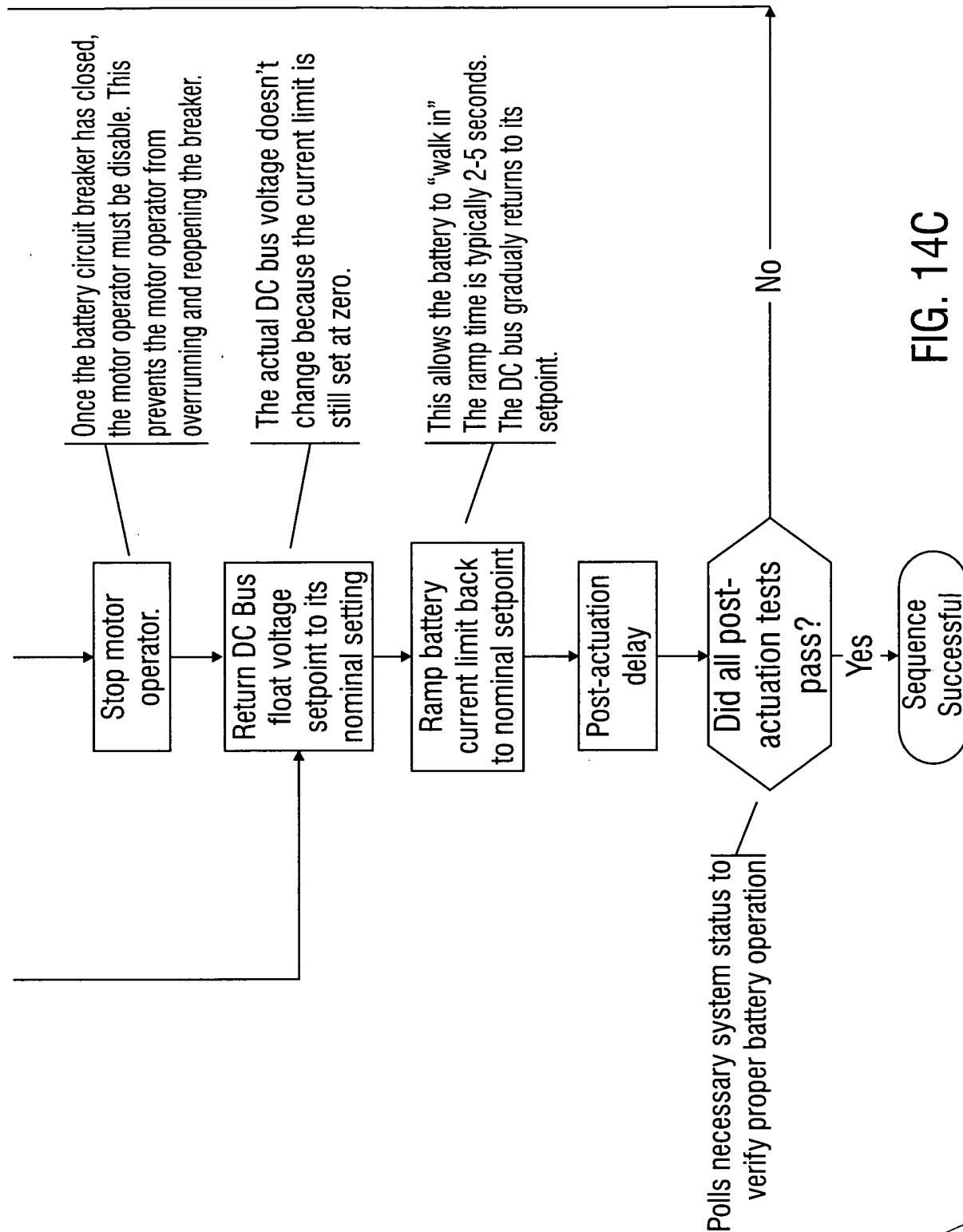


FIG. 14C



2007273-080102

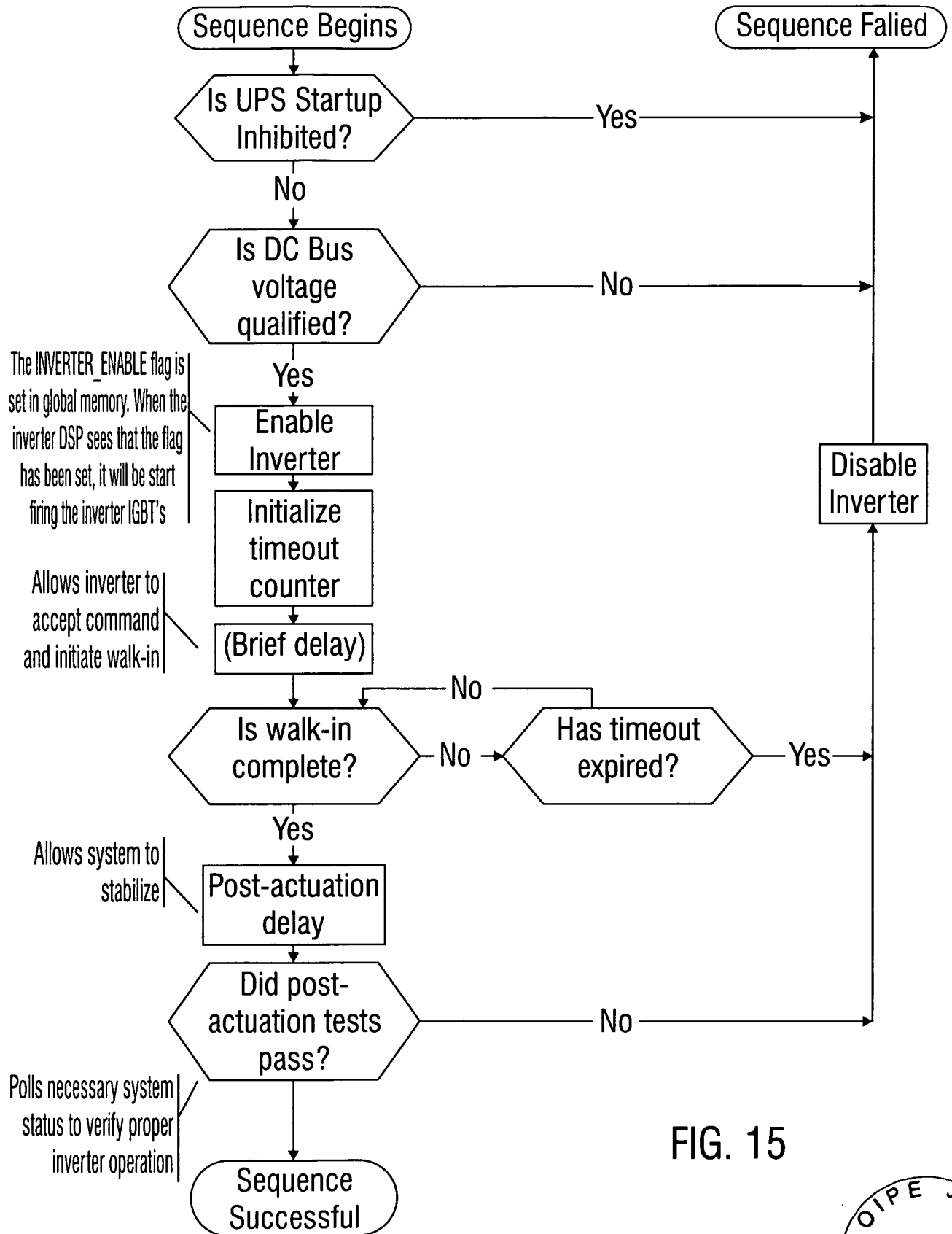
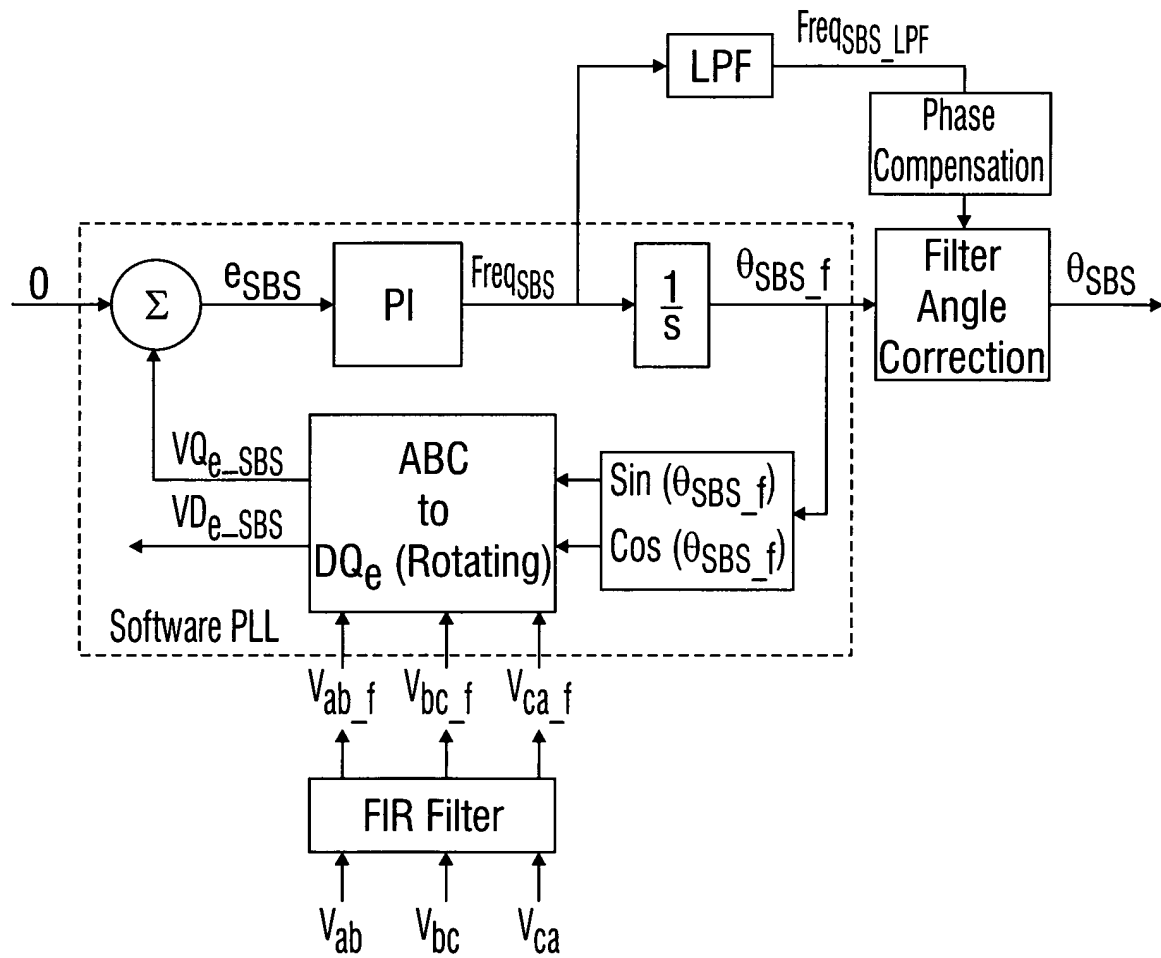


FIG. 15



20100723.080102



Static Bypass Switch L-L Voltage

FIG. 16



20100723-080102

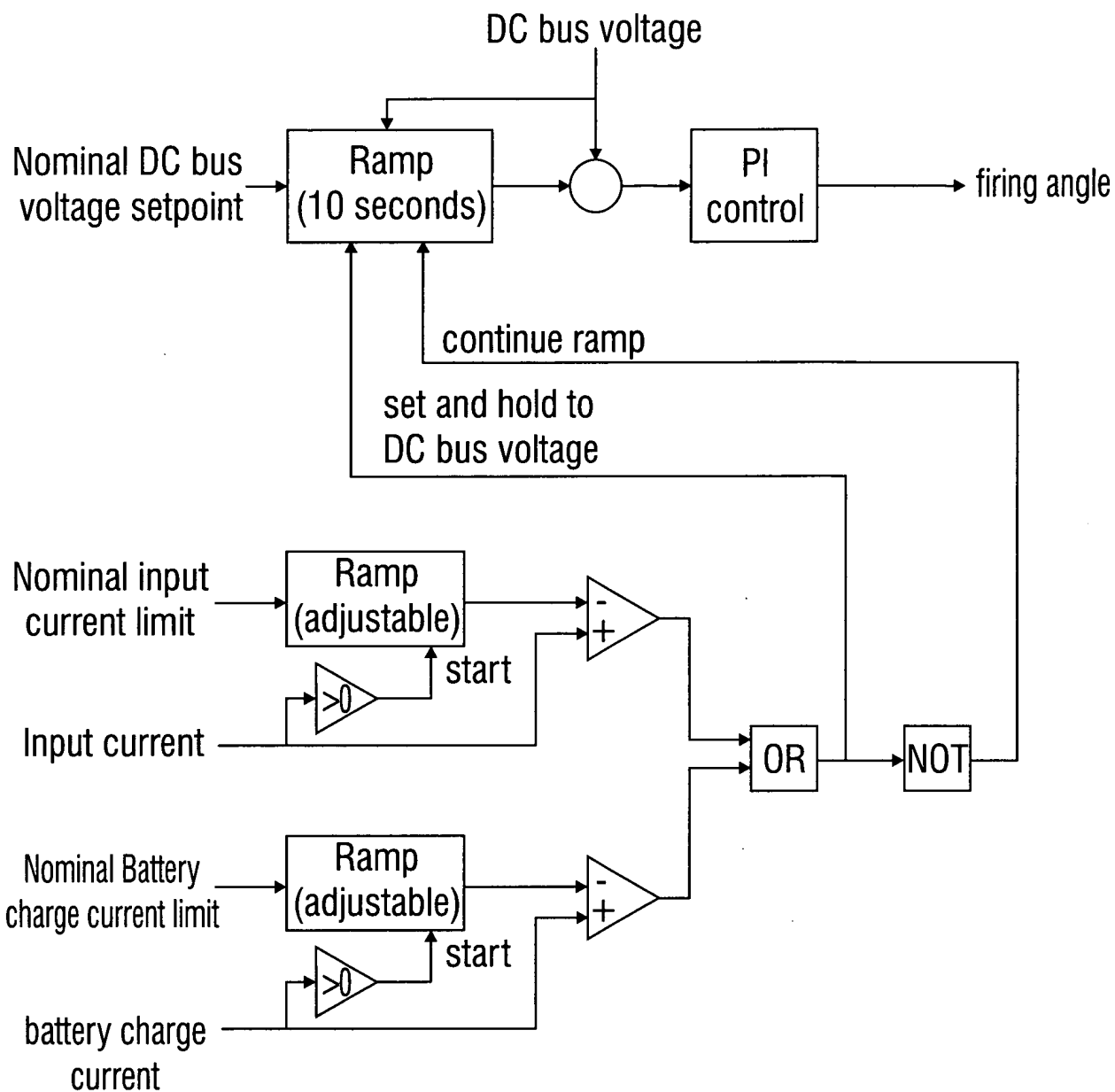


FIG. 17A



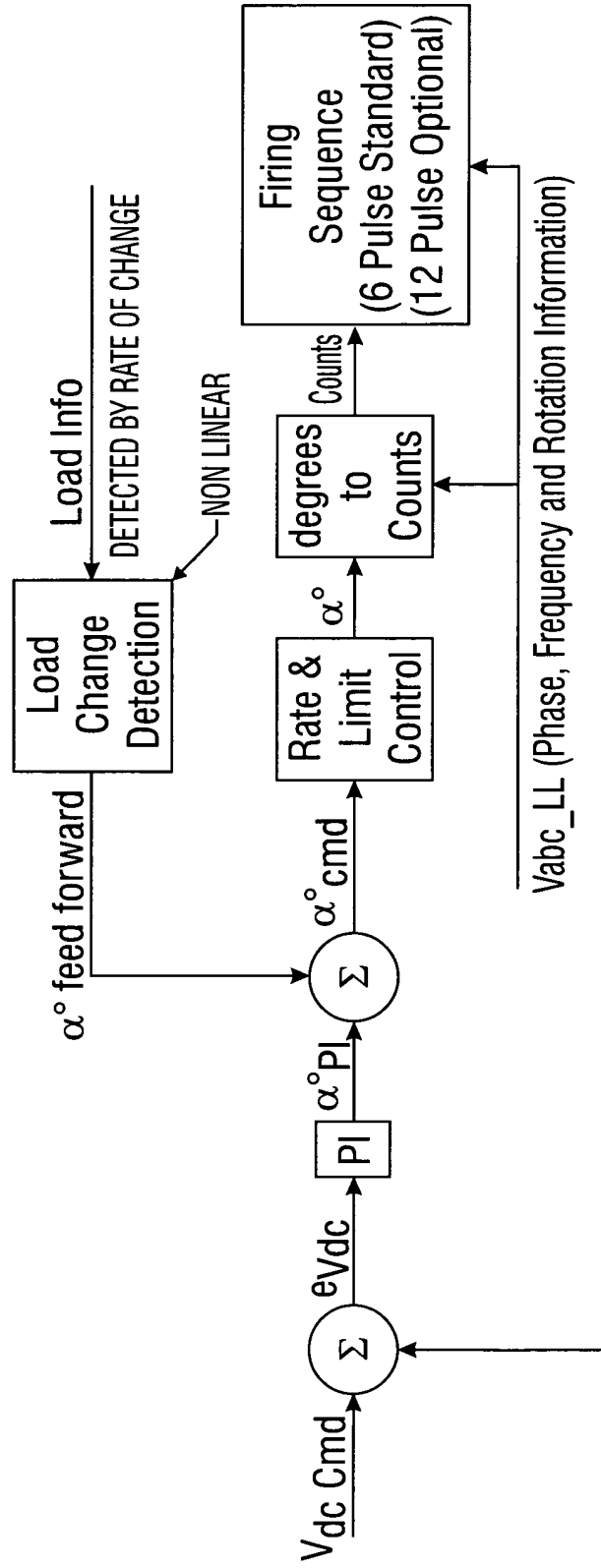


FIG. 17B

20100801 E2240001

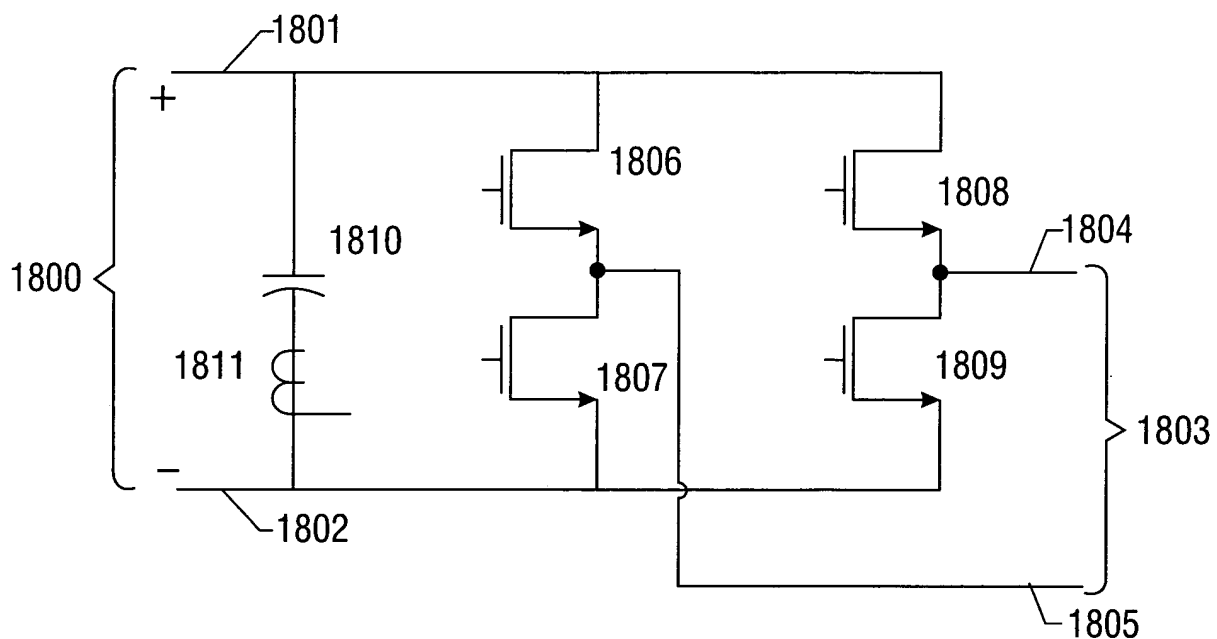


FIG. 18A

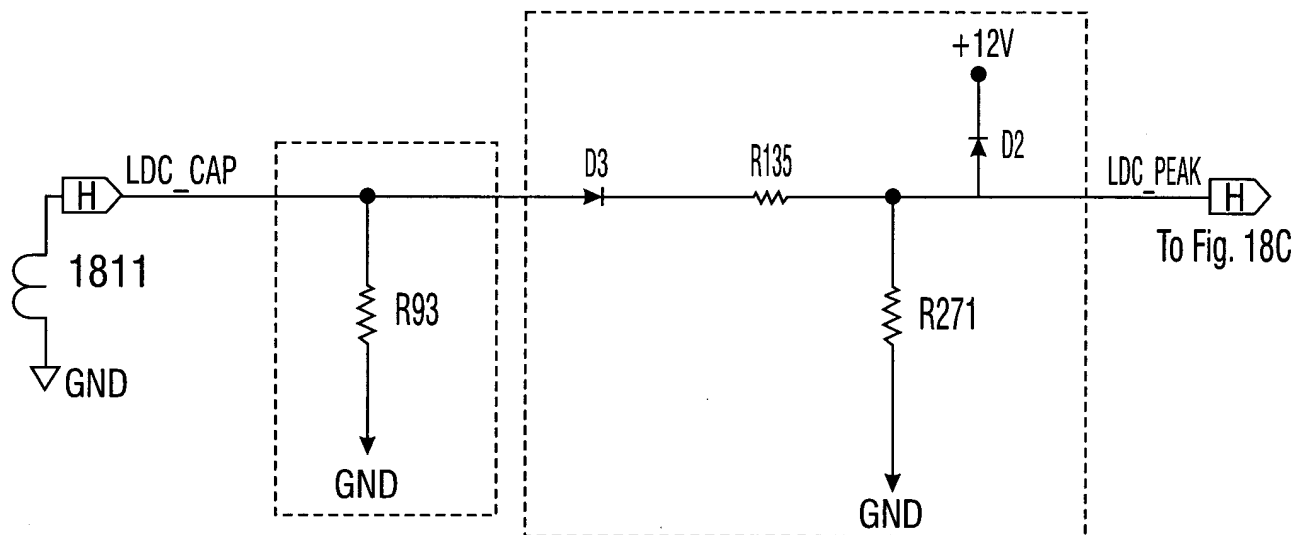


FIG. 18B



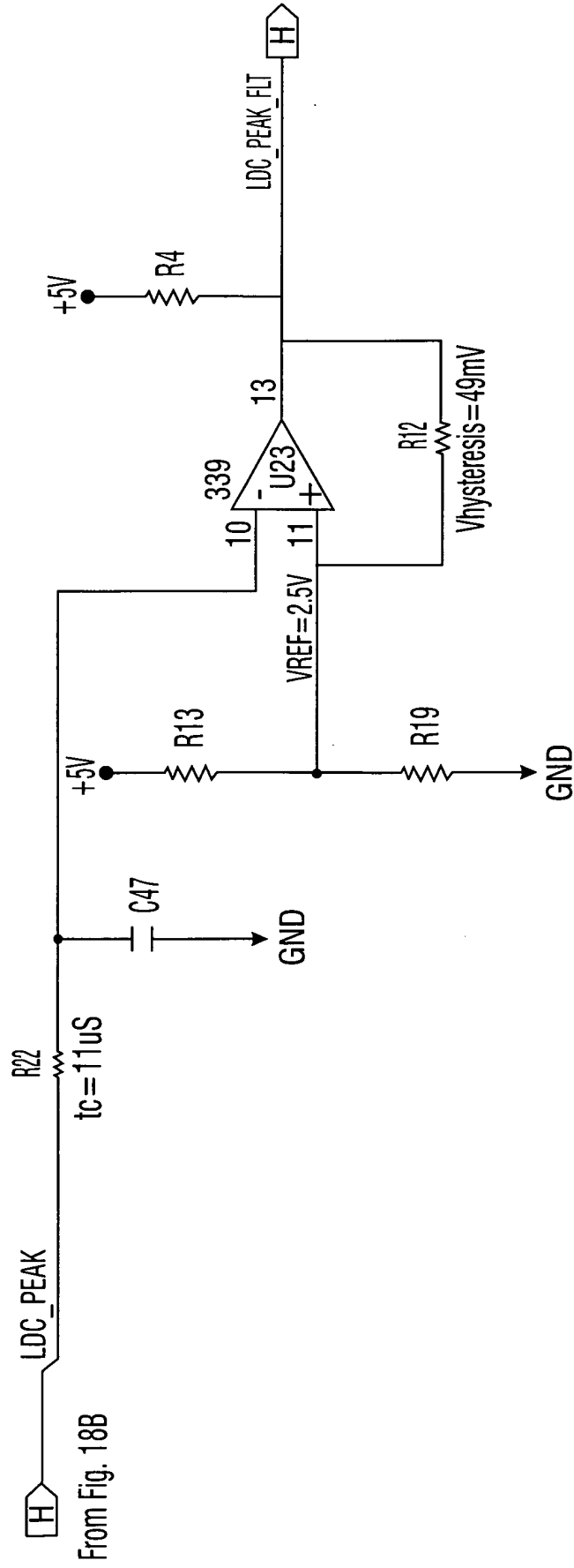


FIG. 18C



20100723-080102

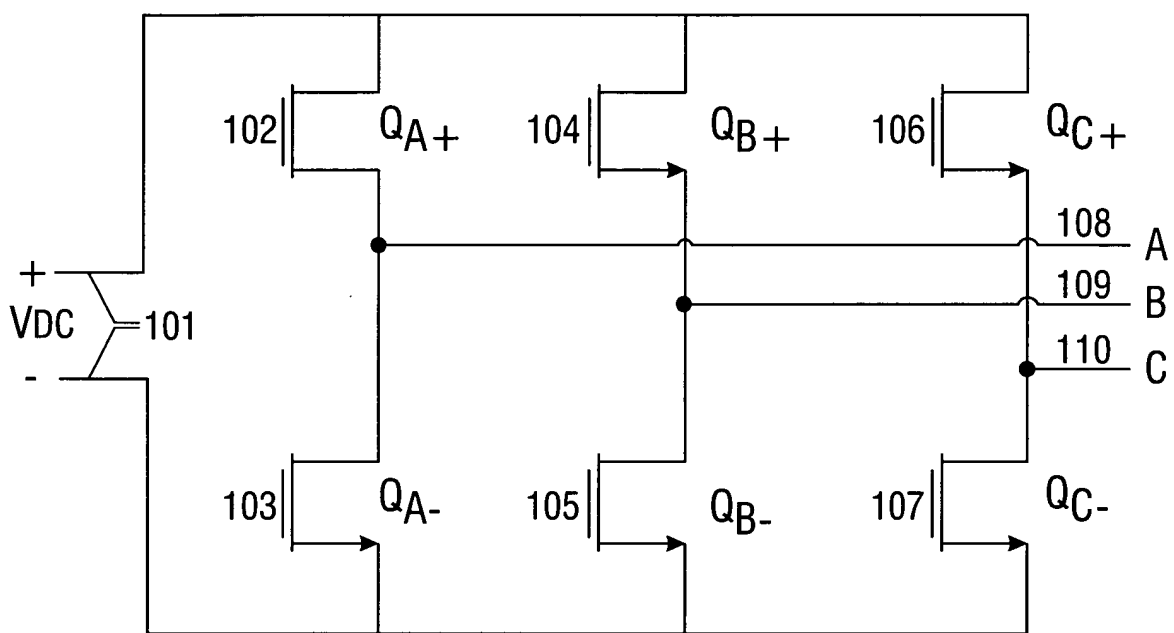


FIG. 19



Switch (0=OFF, i=ON)			Line to Neutral Voltage Vectors					Line to Line Voltage Vectors				
S_{C+}	S_{B+}	S_{A+}	V_{AN}	V_{BN}	V_{CN}	$V=[V_{QS} \ V_{DS}]^T$	Vector	V_{AB}	V_{BC}	V_{CA}	$V=[V_{QS} \ V_{DS}]^T$	Vector
0	0	1	$\frac{2}{3}V_{dc}$	$-\frac{1}{3}V_{dc}$	$-\frac{1}{3}V_{dc}$	$\frac{2}{3}V_{dc} \angle 0^\circ$	\vec{V}_1	V_{dc}	0	$-V_{dc}$	$\frac{2}{\sqrt{3}}V_{dc} \angle -30^\circ$	\vec{V}_1
1	0	1	$\frac{1}{3}V_{dc}$	$-\frac{2}{3}V_{dc}$	$\frac{1}{3}V_{dc}$	$\frac{2}{3}V_{dc} \angle 60^\circ$	\vec{V}_2	V_{dc}	$-V_{dc}$	0	$\frac{2}{\sqrt{3}}V_{dc} \angle 30^\circ$	\vec{V}_2
1	0	0	$-\frac{1}{3}V_{dc}$	$-\frac{1}{3}V_{dc}$	$\frac{2}{3}V_{dc}$	$\frac{2}{3}V_{dc} \angle 120^\circ$	\vec{V}_3	0	$-V_{dc}$	V_{dc}	$\frac{2}{\sqrt{3}}V_{dc} \angle 90^\circ$	\vec{V}_3
1	1	0	$-\frac{2}{3}V_{dc}$	$\frac{1}{3}V_{dc}$	$\frac{1}{3}V_{dc}$	$\frac{2}{3}V_{dc} \angle 180^\circ$	\vec{V}_4	$-V_{dc}$	0	V_{dc}	$\frac{2}{\sqrt{3}}V_{dc} \angle 150^\circ$	\vec{V}_4
0	1	0	$-\frac{1}{3}V_{dc}$	$\frac{2}{3}V_{dc}$	$-\frac{1}{3}V_{dc}$	$\frac{2}{3}V_{dc} \angle 240^\circ$	\vec{V}_5	$-V_{dc}$	V_{dc}	0	$\frac{2}{\sqrt{3}}V_{dc} \angle 210^\circ$	\vec{V}_5
0	1	1	$\frac{1}{3}V_{dc}$	$\frac{1}{3}V_{dc}$	$-\frac{2}{3}V_{dc}$	$\frac{2}{3}V_{dc} \angle 300^\circ$	\vec{V}_6	0	V_{dc}	$-V_{dc}$	$\frac{2}{\sqrt{3}}V_{dc} \angle 270^\circ$	\vec{V}_6
0	0	0	0	0	0	0	\vec{V}_7	0	0	0	0	\vec{V}_7
1	1	1	0	0	0	0	\vec{V}_8	0	0	0	0	\vec{V}_8

FIG. 20

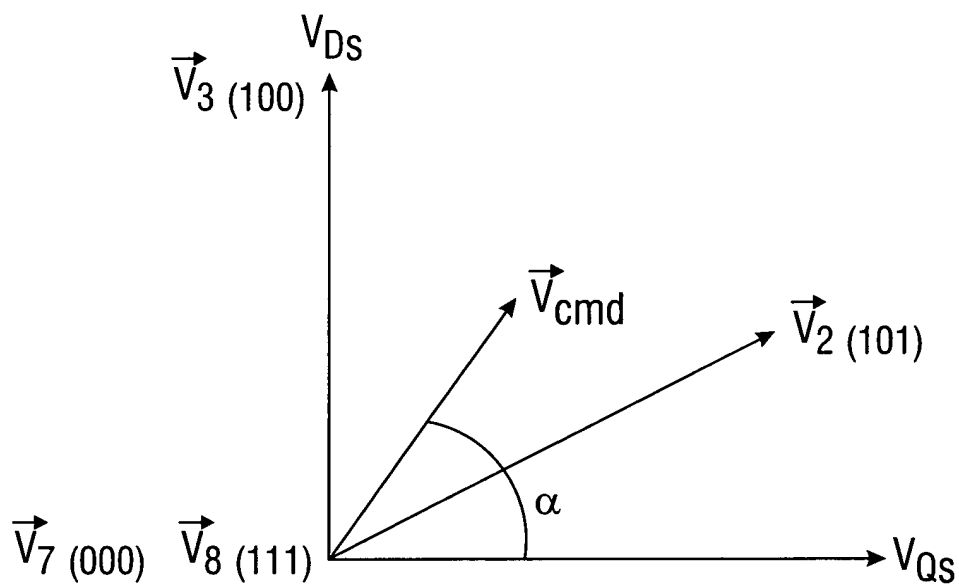


FIG. 22A

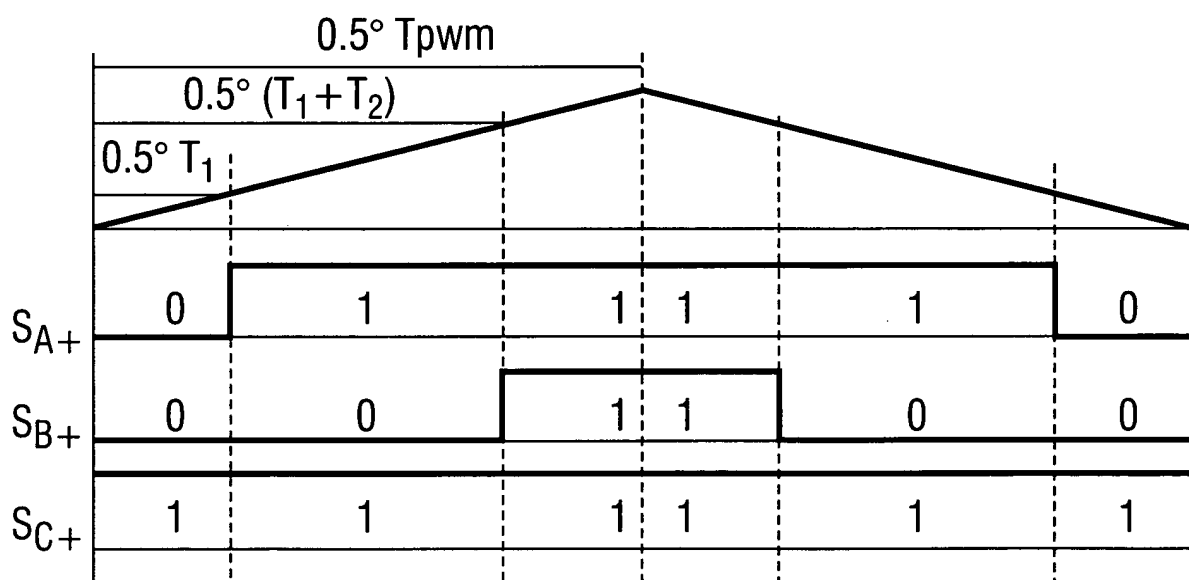


FIG. 22B



20100801-080102

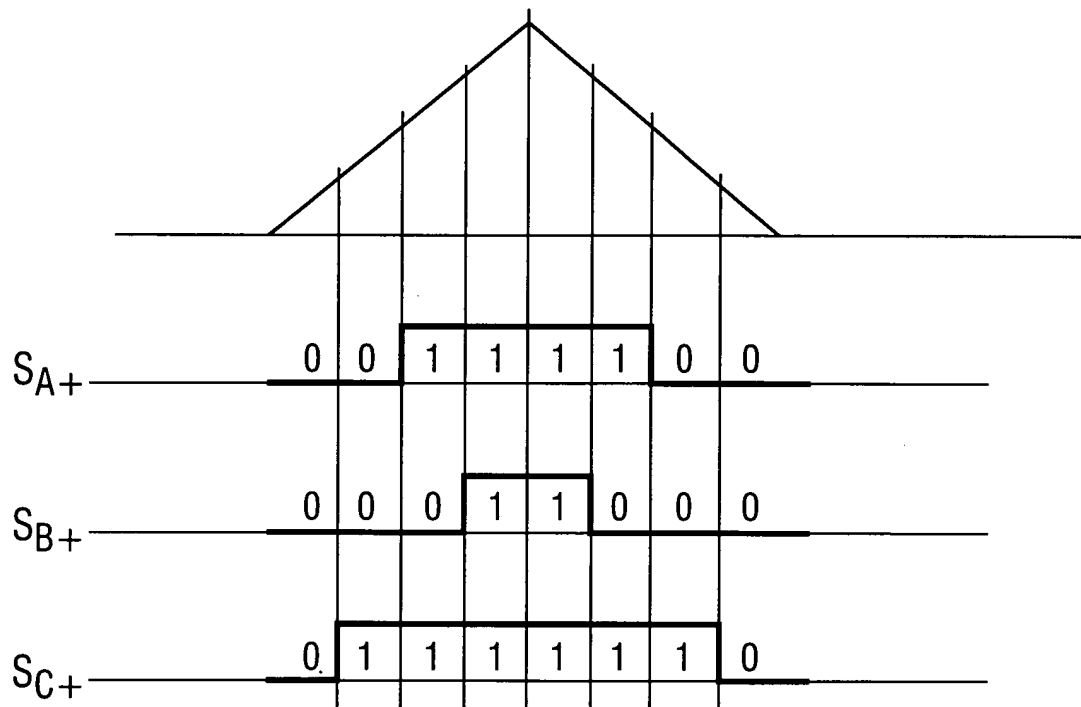


FIG. 22C



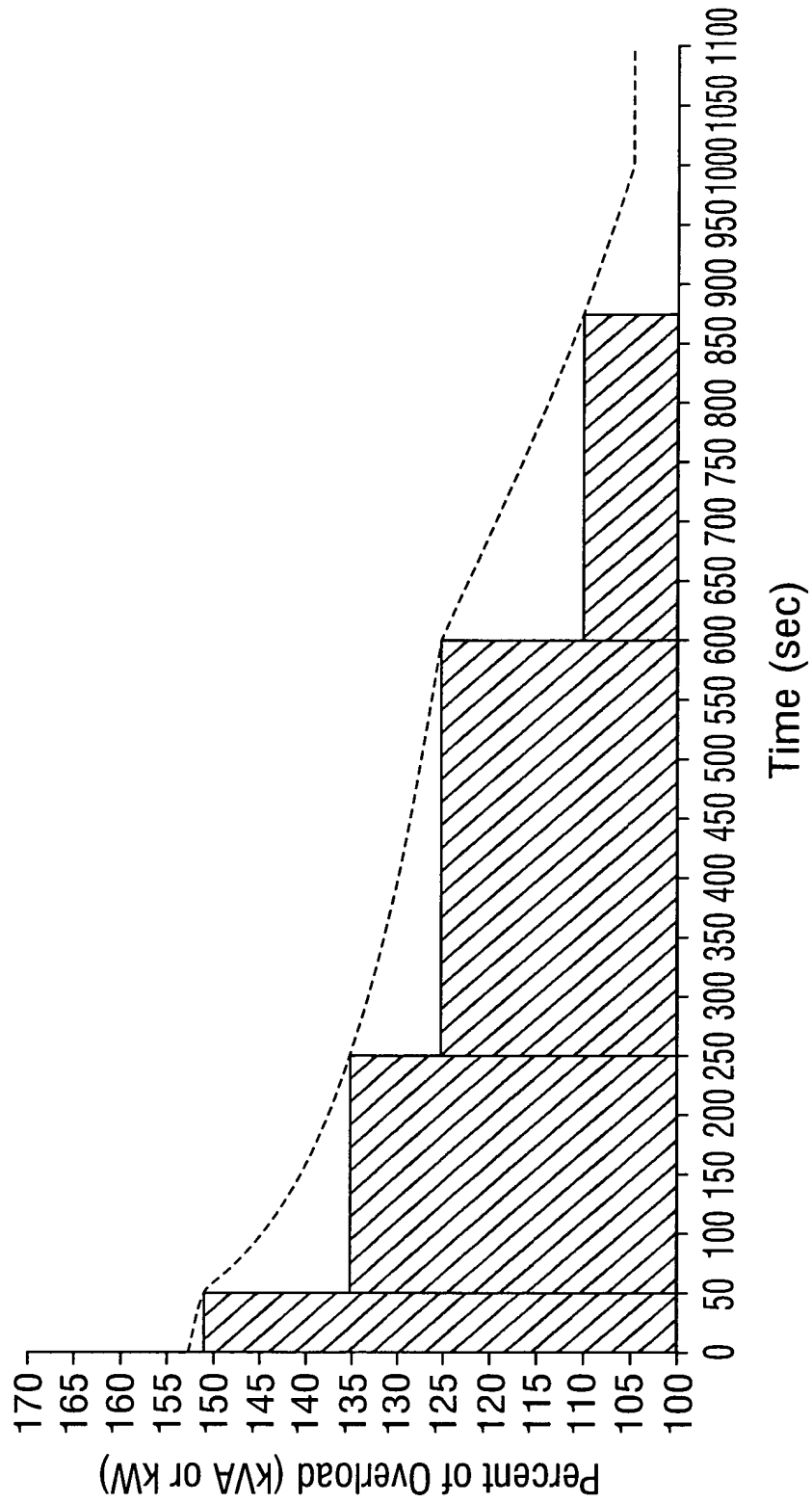


FIG. 23



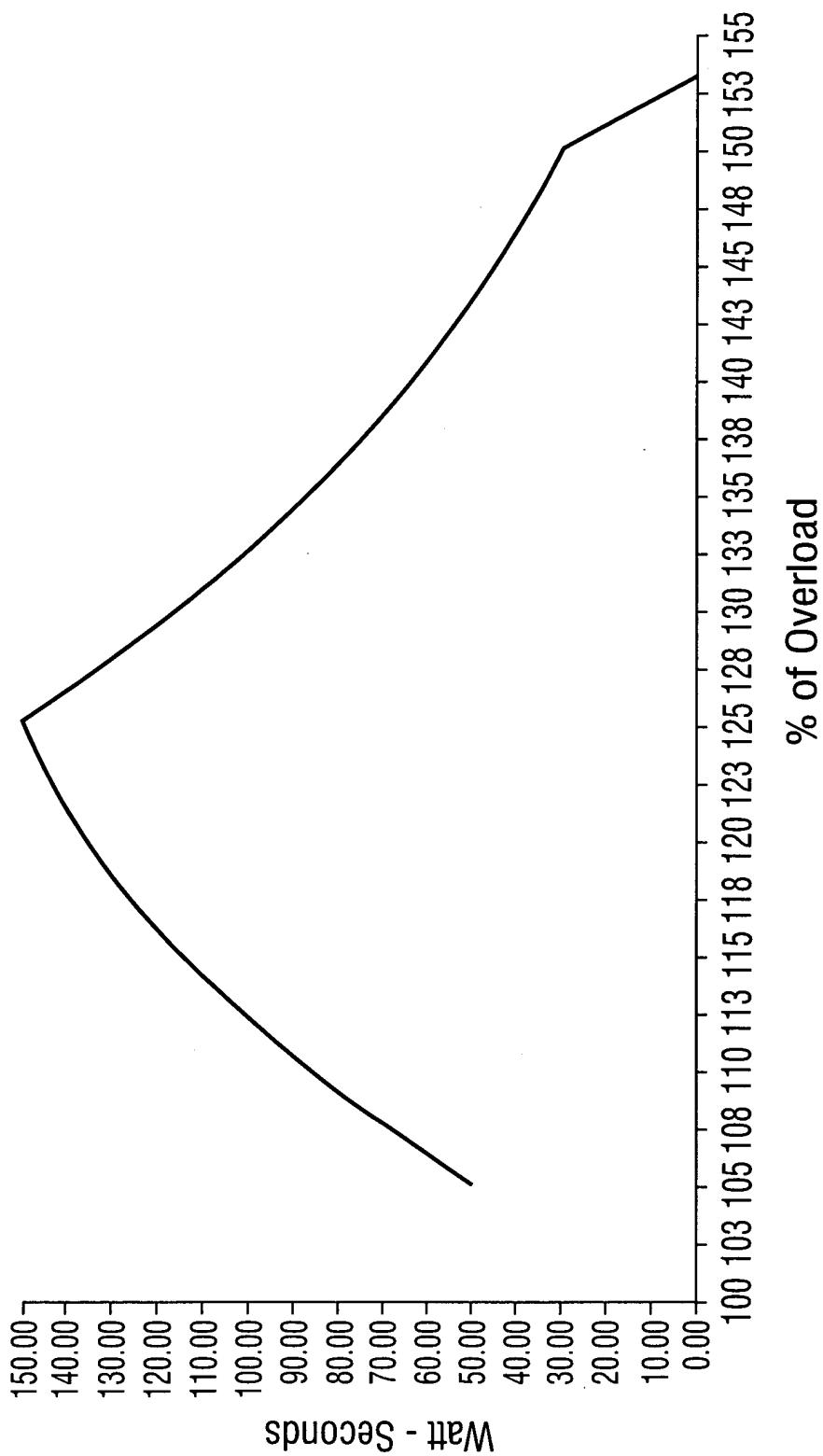
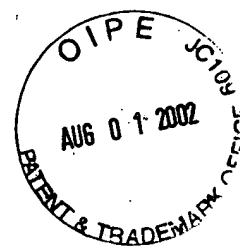


FIG. 24



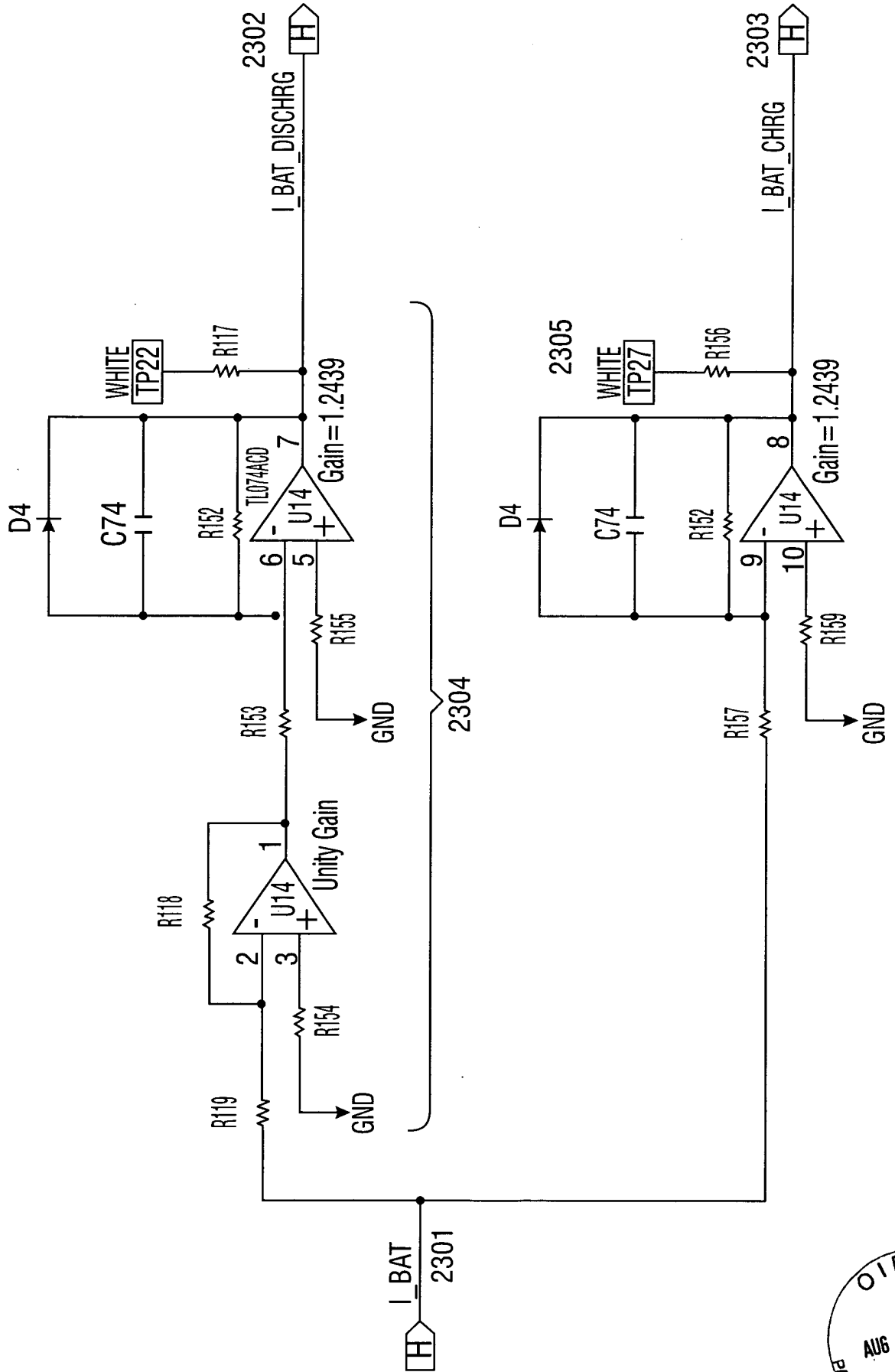


FIG. 25



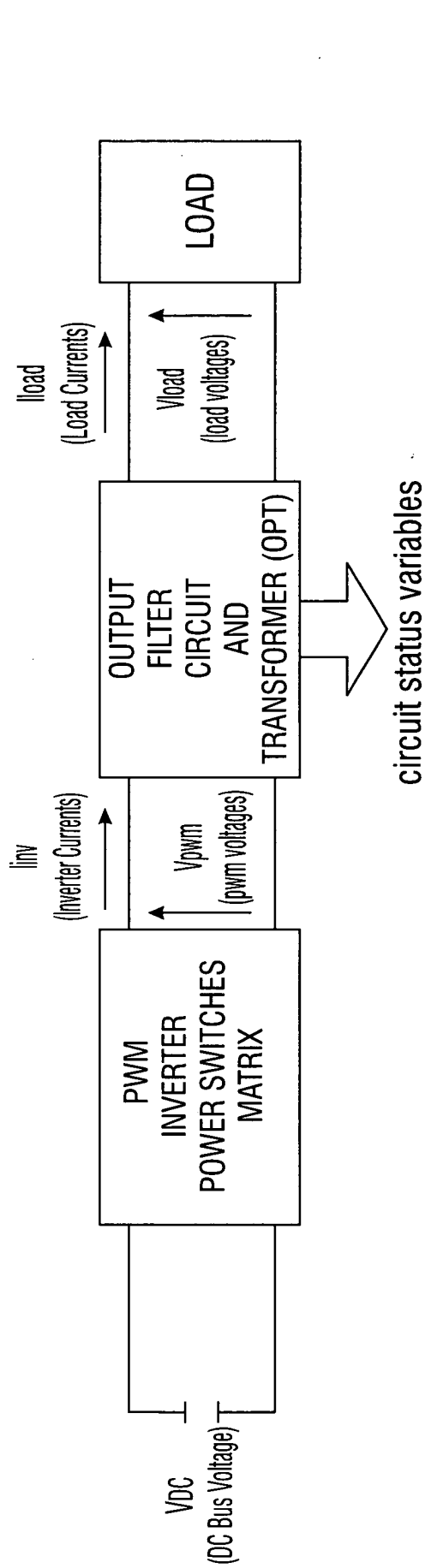


FIG. 26

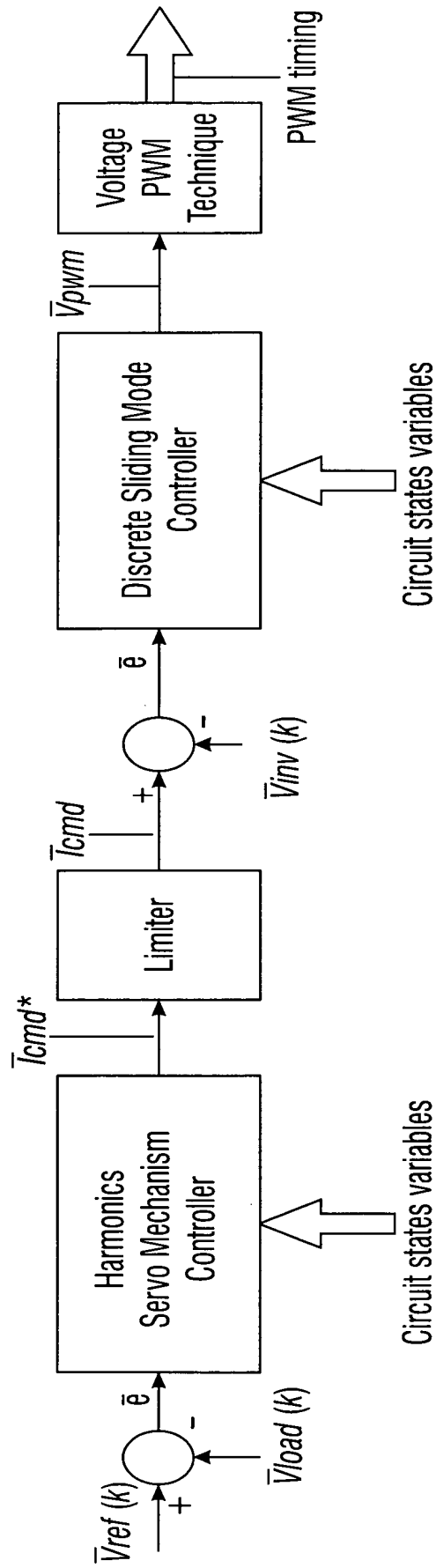


FIG. 27

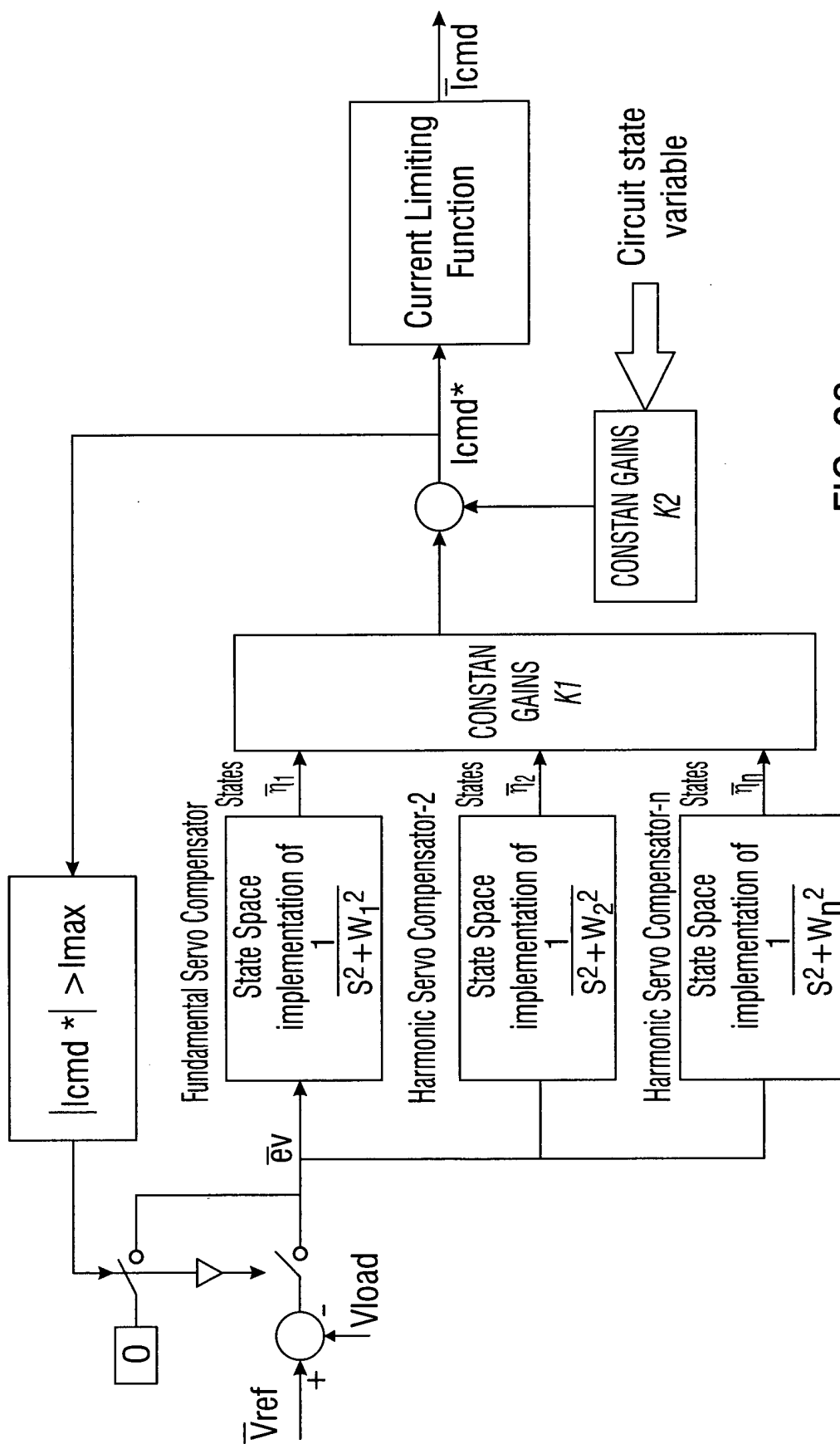


FIG. 28



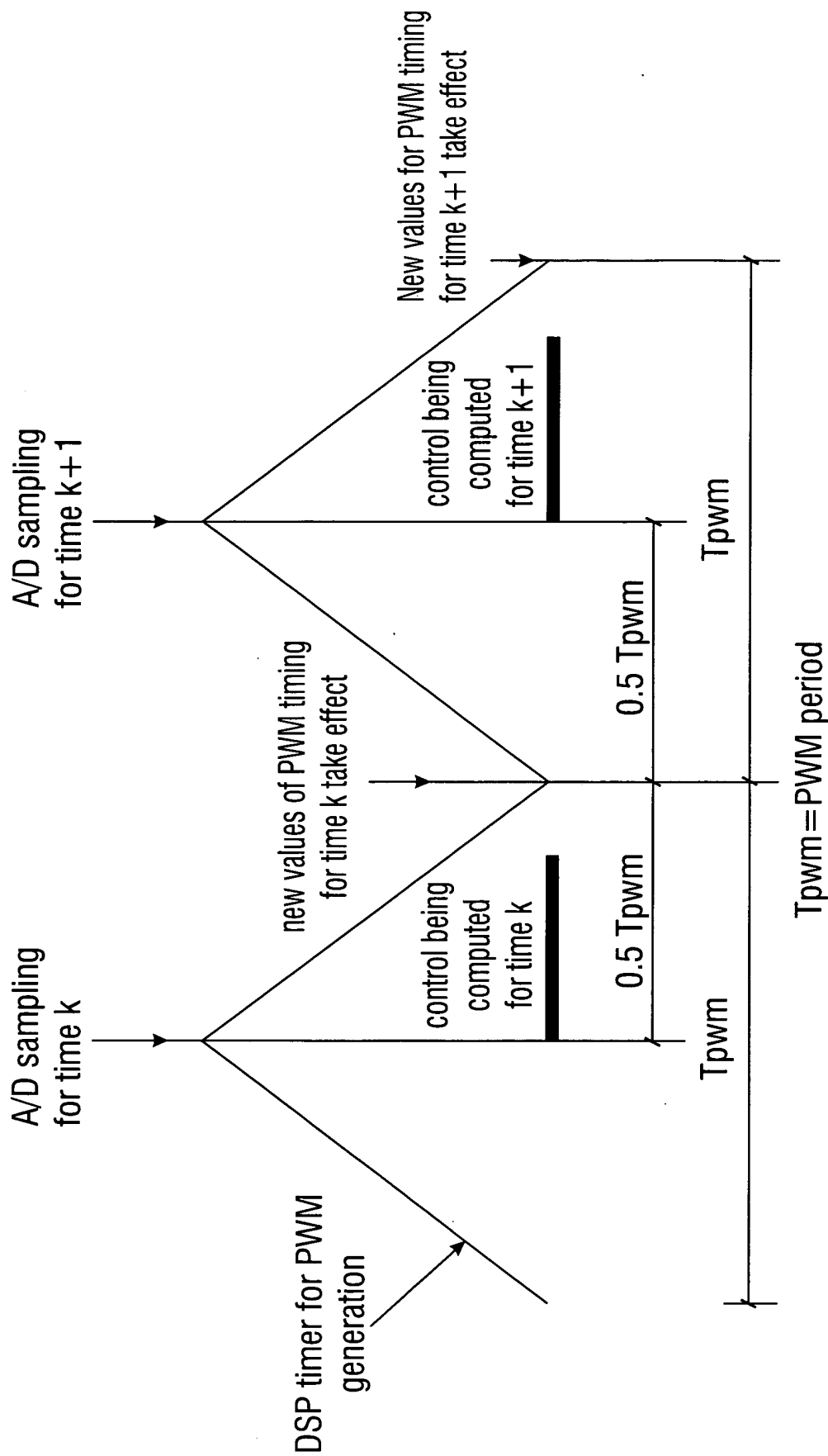


FIG. 29



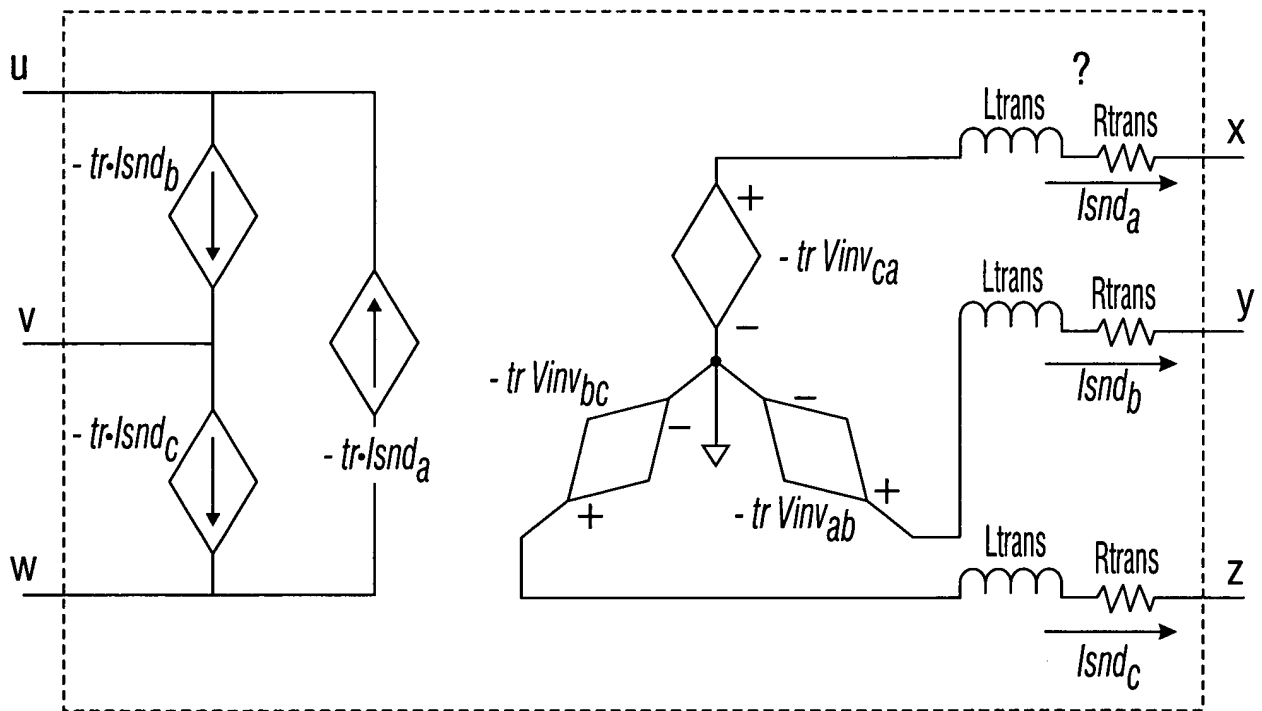


FIG. 31



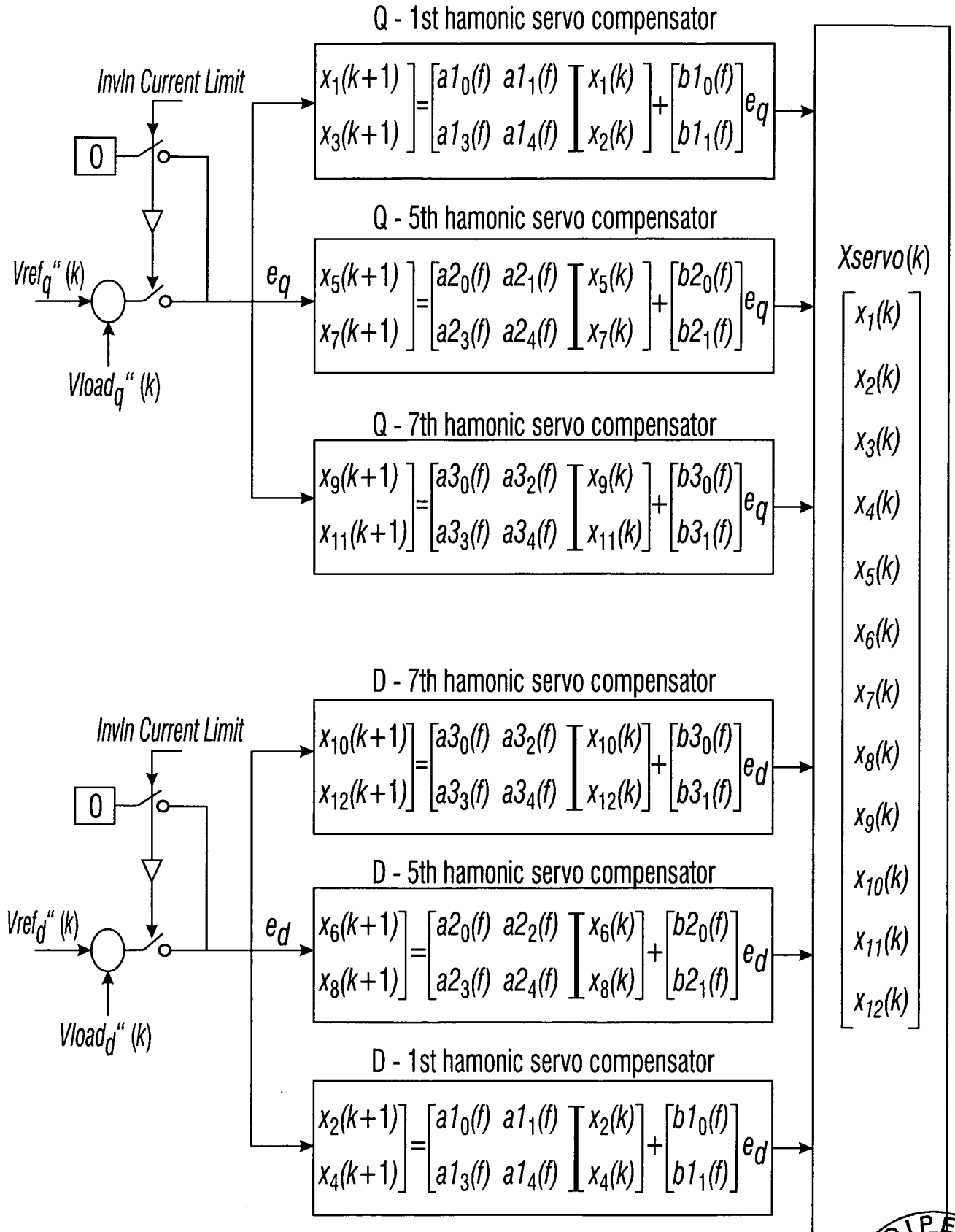


FIG. 32



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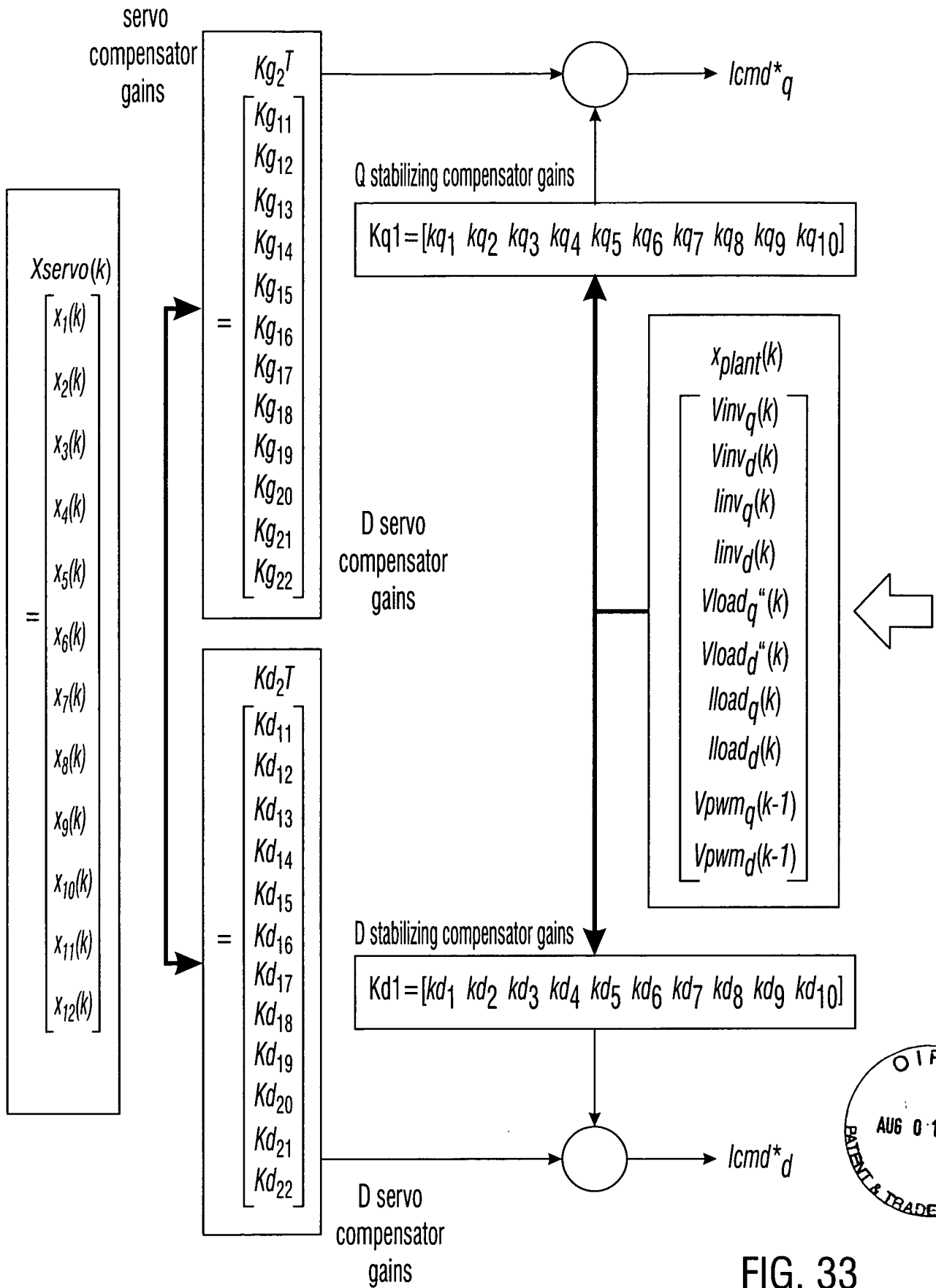


FIG. 33

FIG. 35A-1	FIG. 35A-2	
FIG. 35A-3	FIG. 35A-4	FIG. 35A-5
FIG. 35A-6	FIG. 35A-7	

FIG. 35A



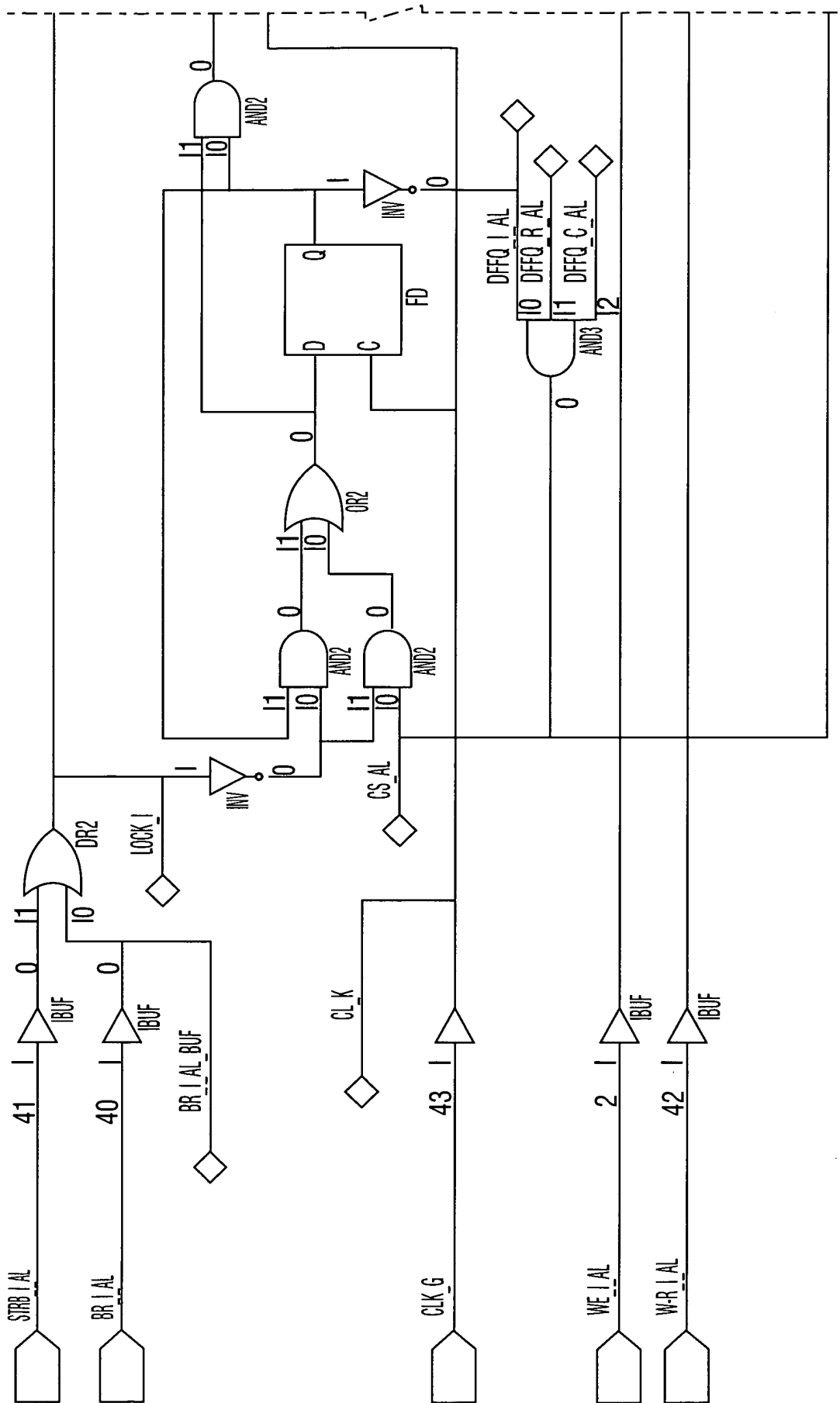


FIG. 35A-1



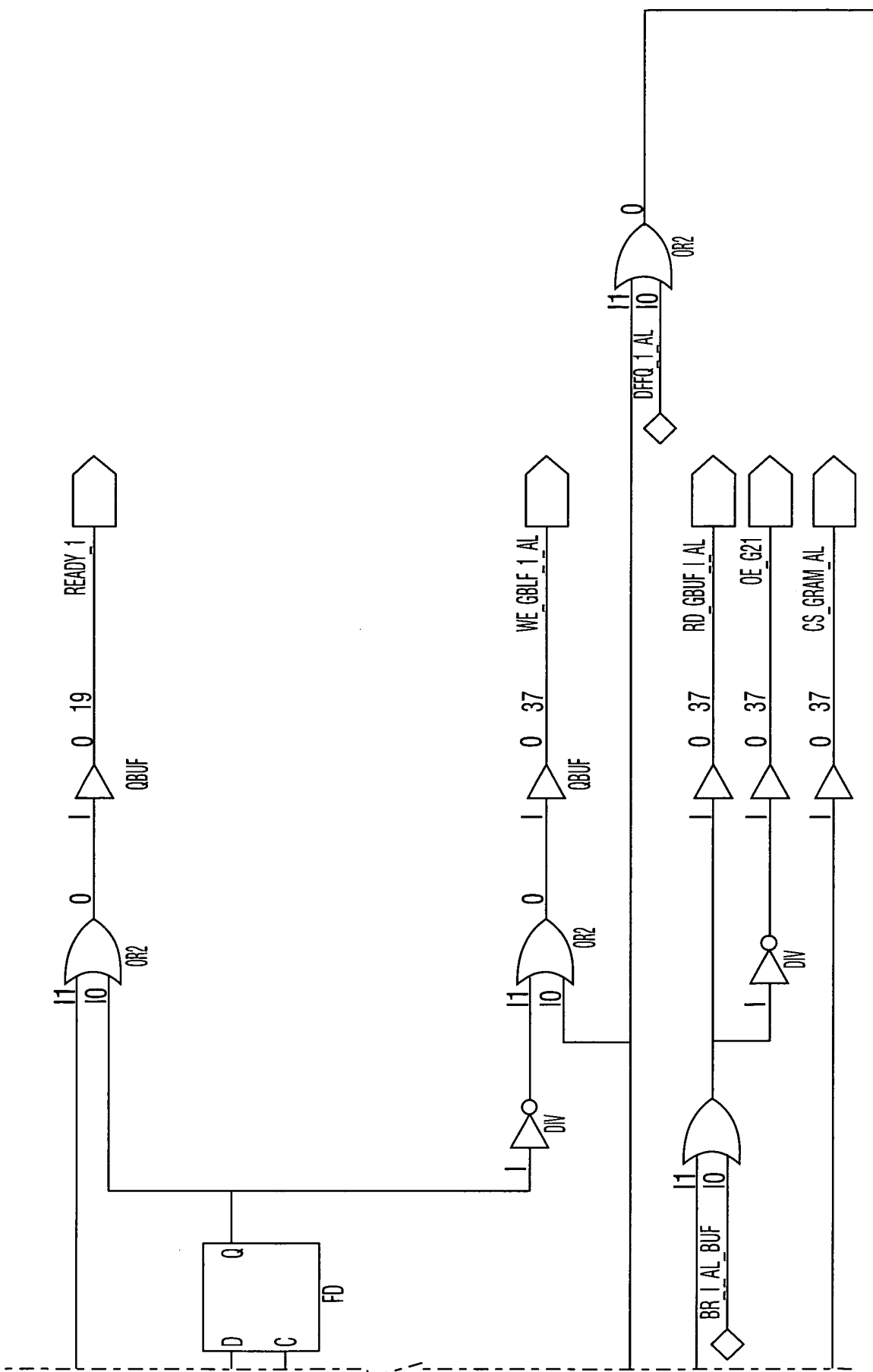


FIG. 35A-2



[illegible]

A circular stamp from the Office of Intellectual Property and Economic (O.I.P.E.). The text "O.I.P.E." is at the top, "AUG 01 2002" is in the center, and "PATENT & TRADEMARK OFFICE" is at the bottom.

SECRET

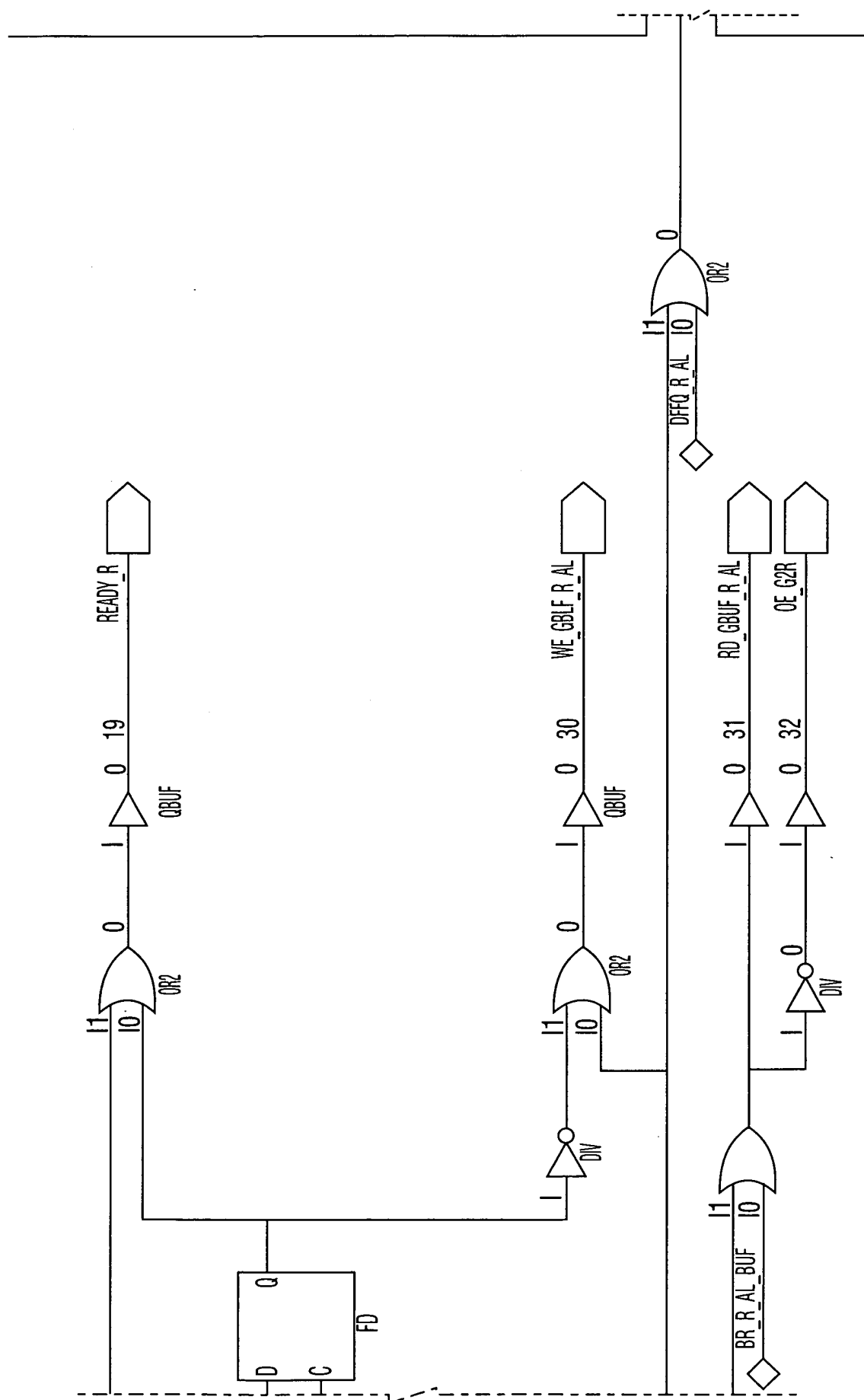
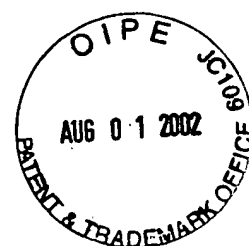


FIG. 35A-4



201080" E22000T

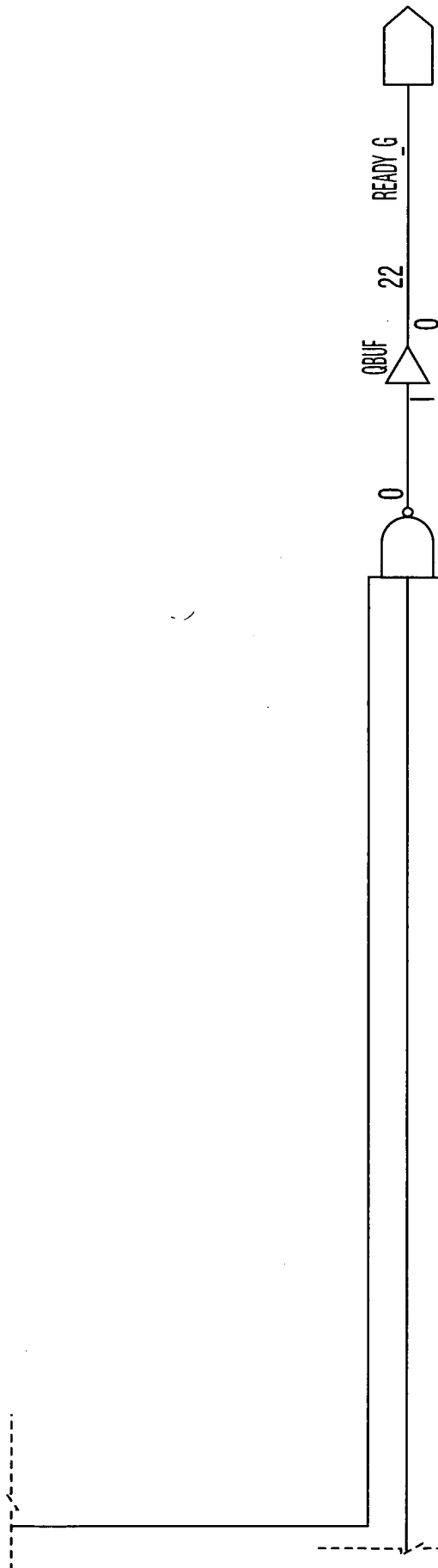


FIG. 35A-5



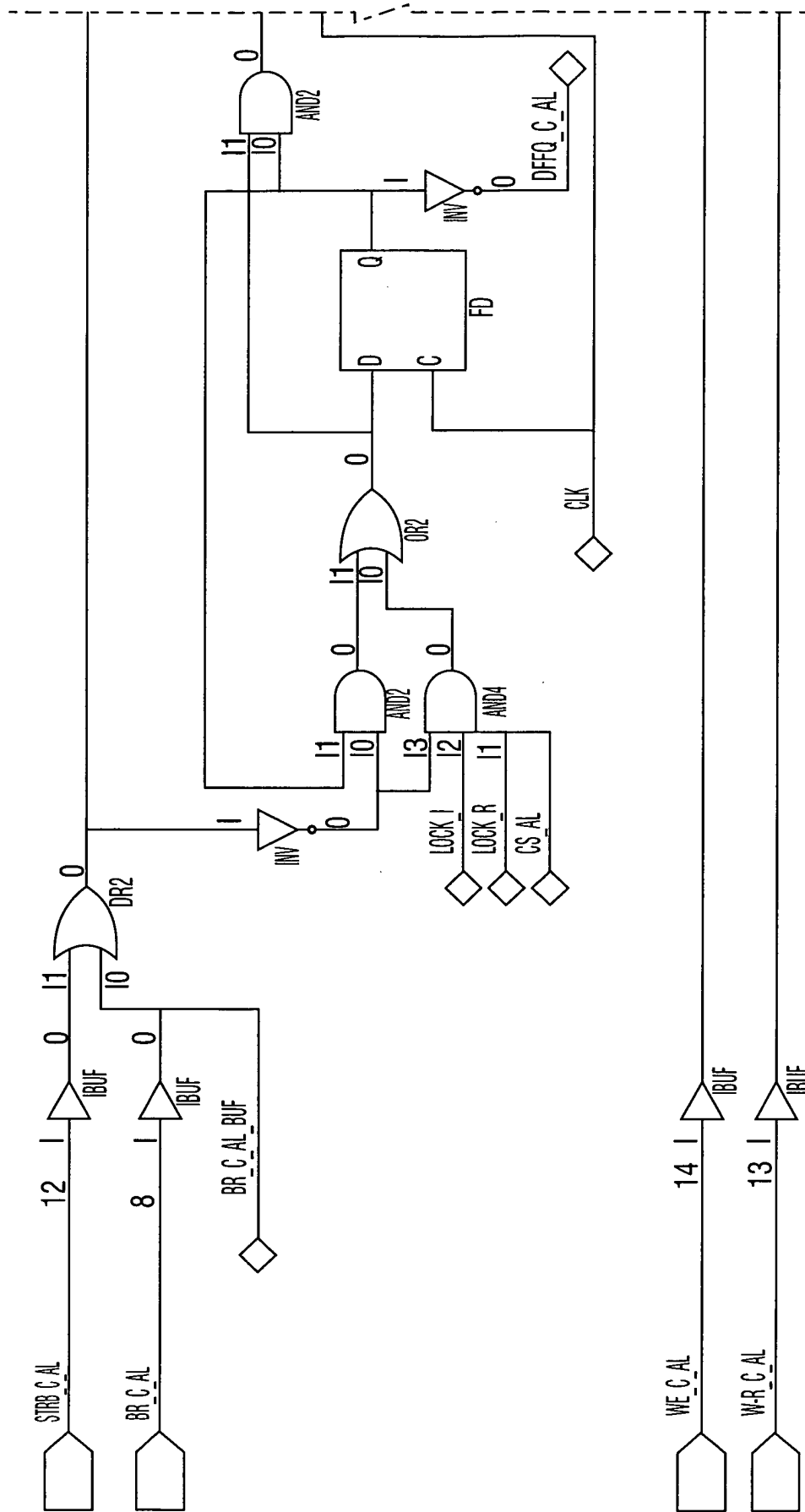


FIG. 35A-6

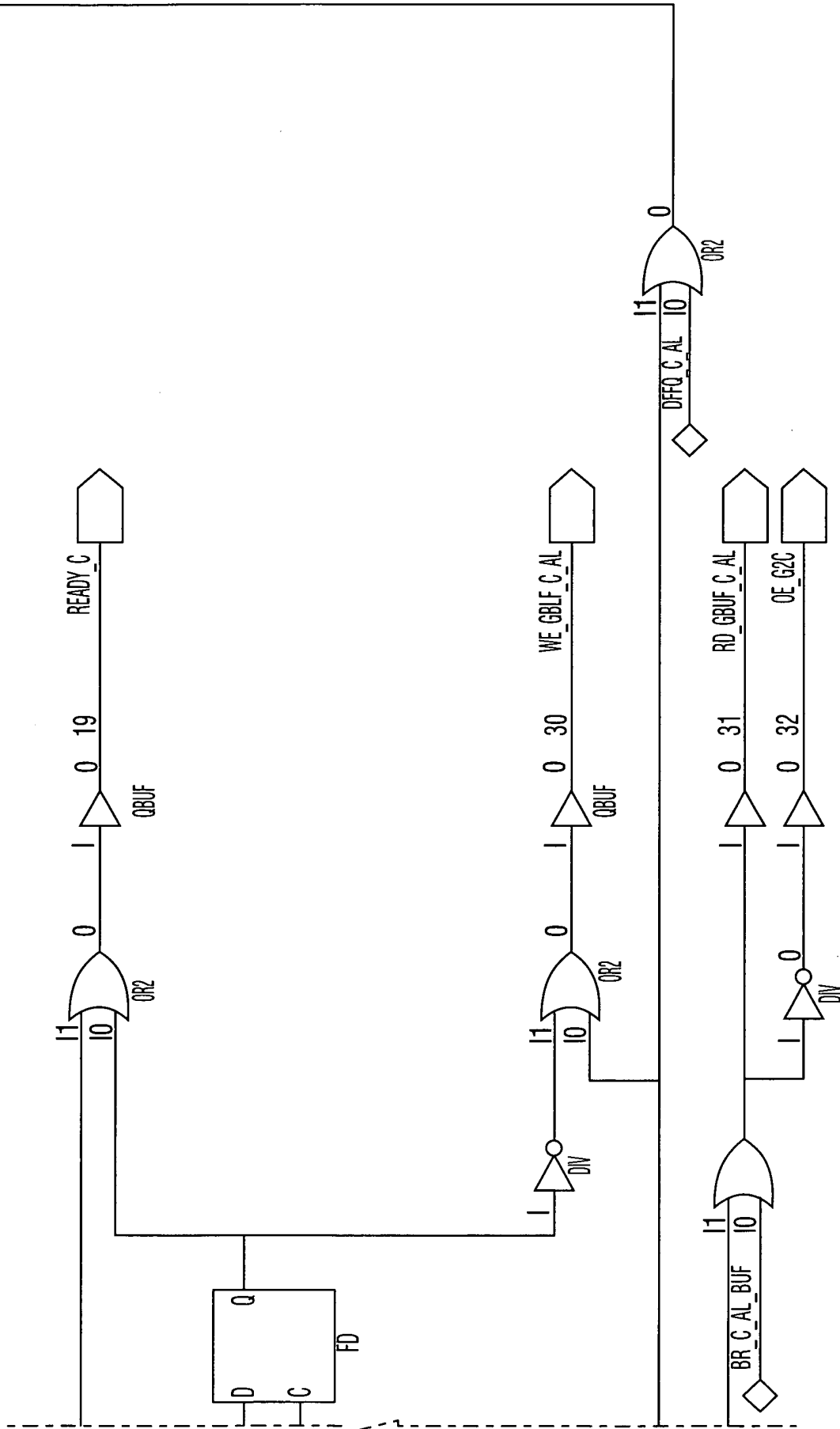


FIG. 35A-7



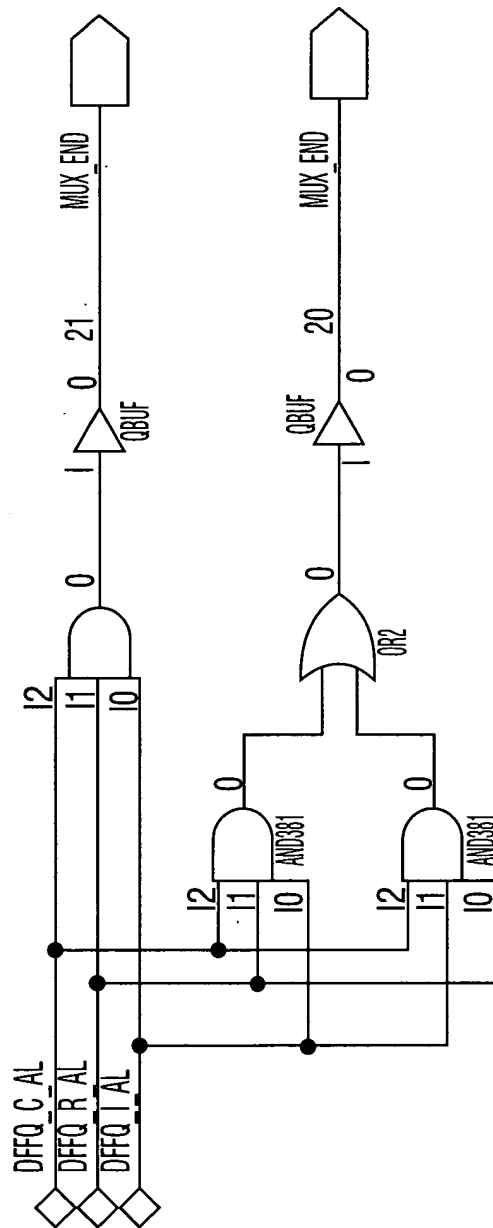


FIG. 35B

20100801 10007273.080102

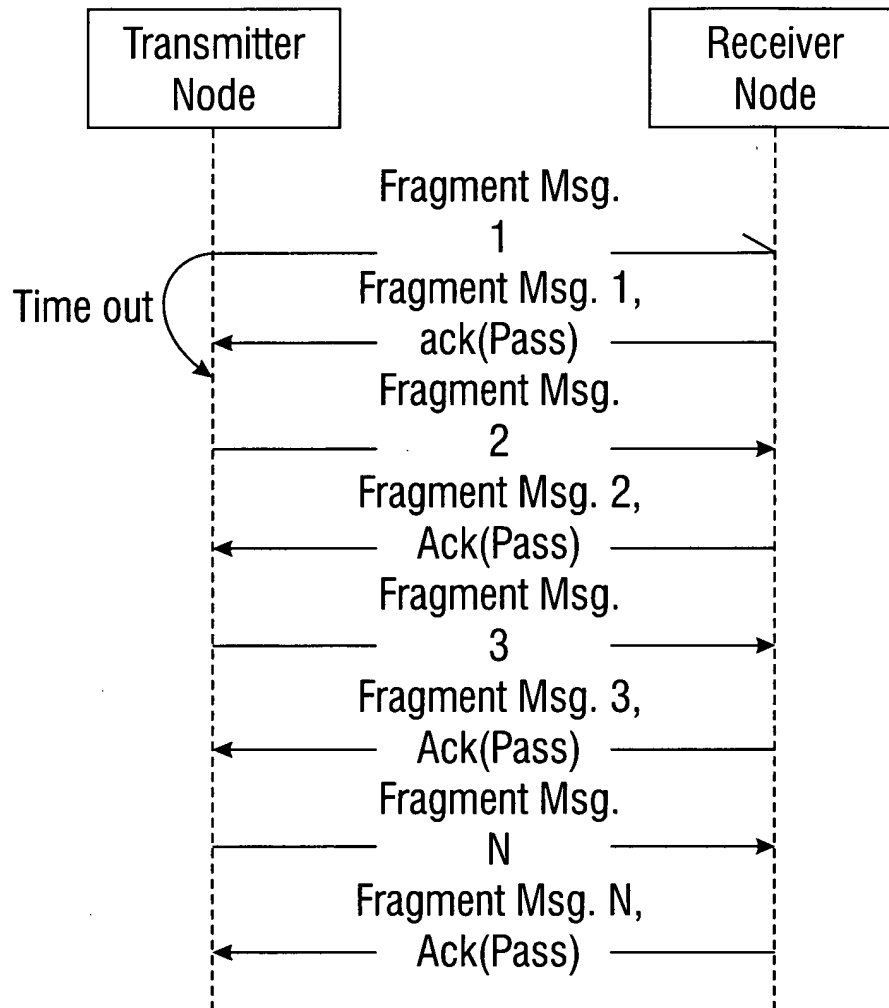


FIG. 36



20108013220001

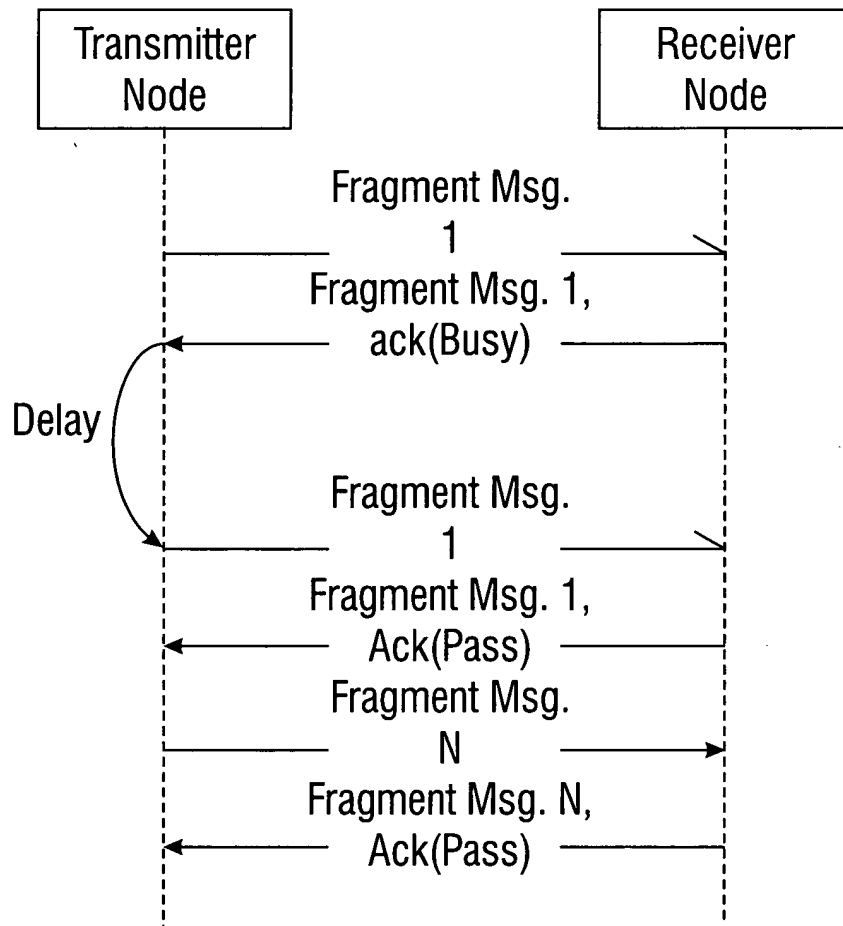


FIG. 37



2010080" E/22000T

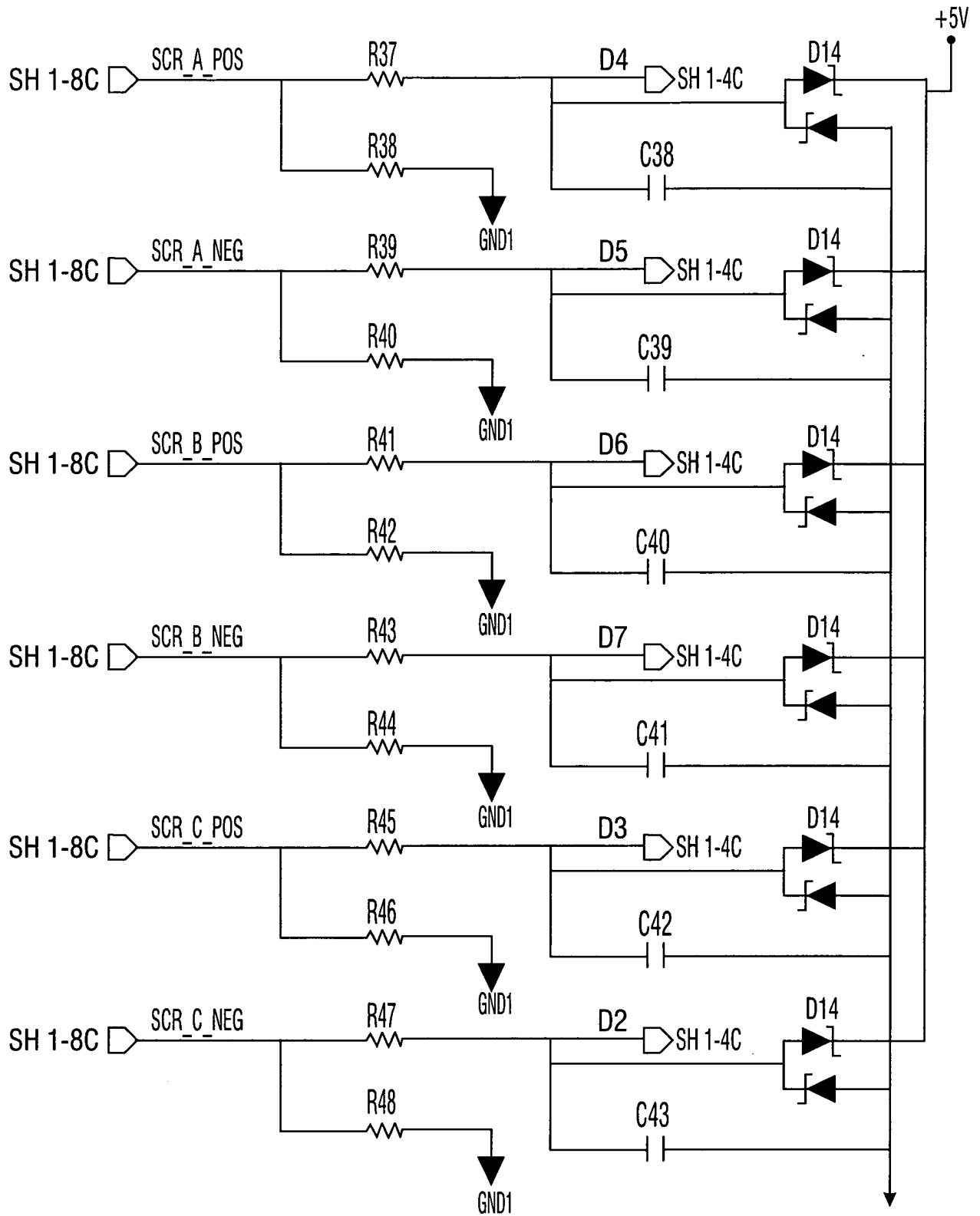


FIG. 38A



201080 "E" 2/0001

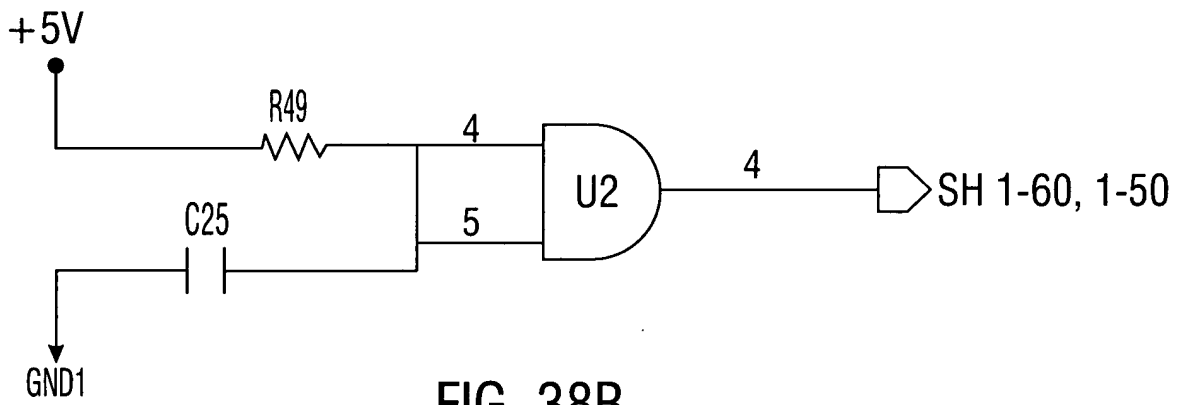


FIG. 38B

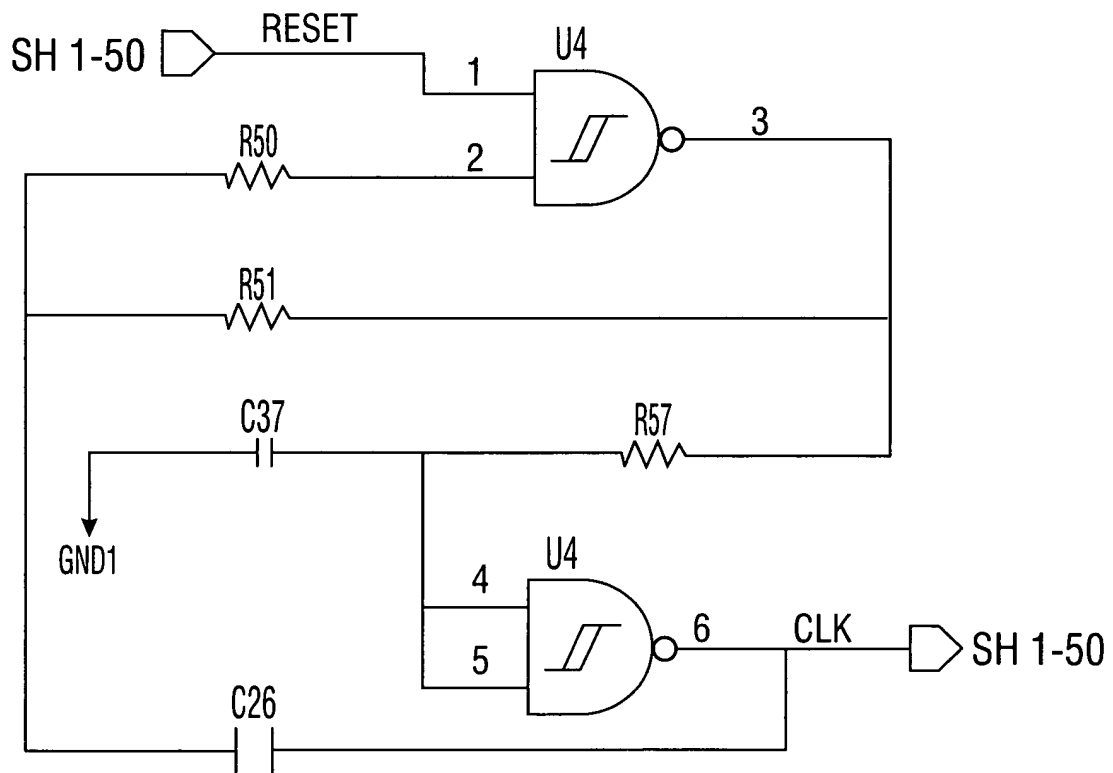


FIG. 38C



20070801 080102

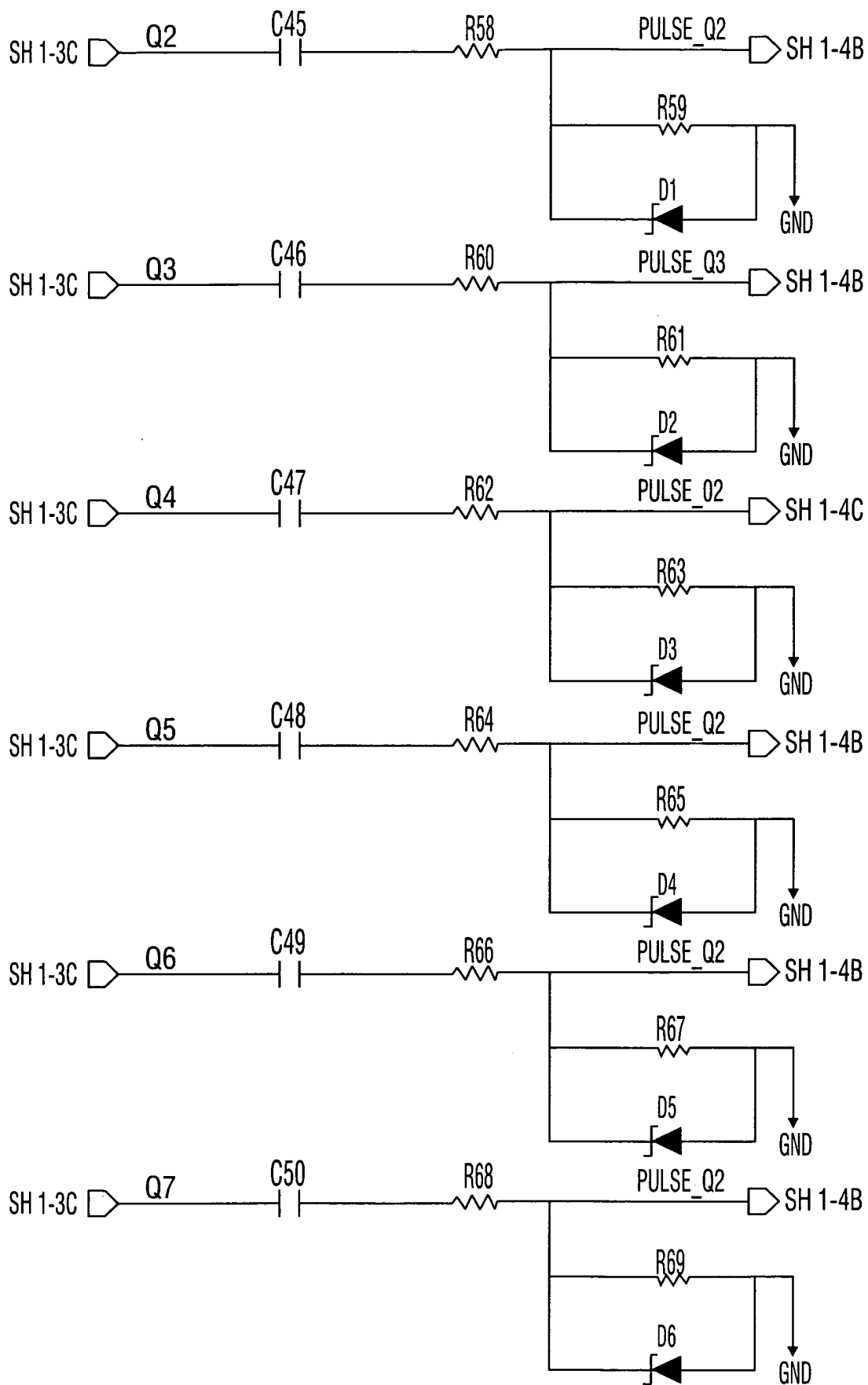


FIG. 38D



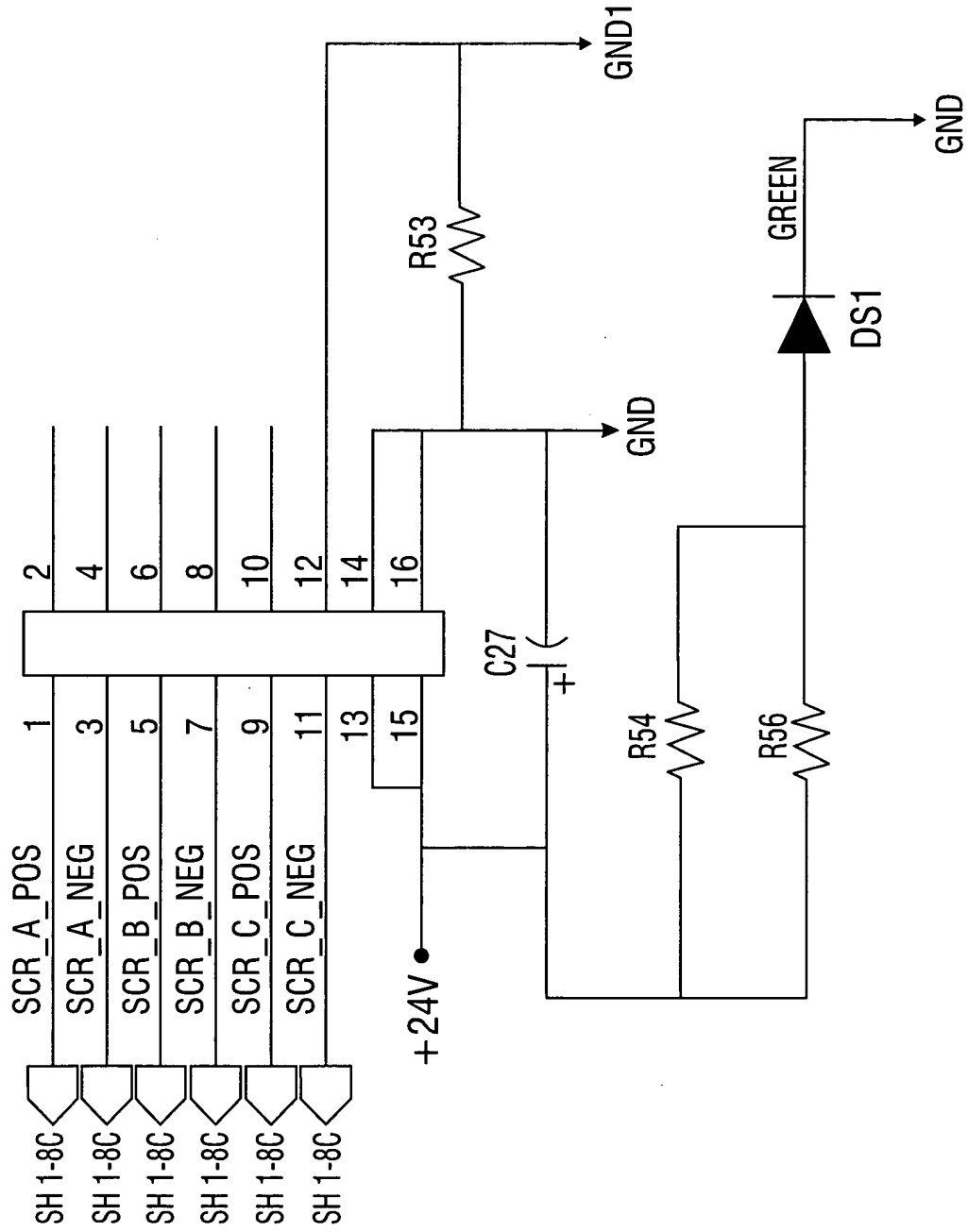


FIG. 38E



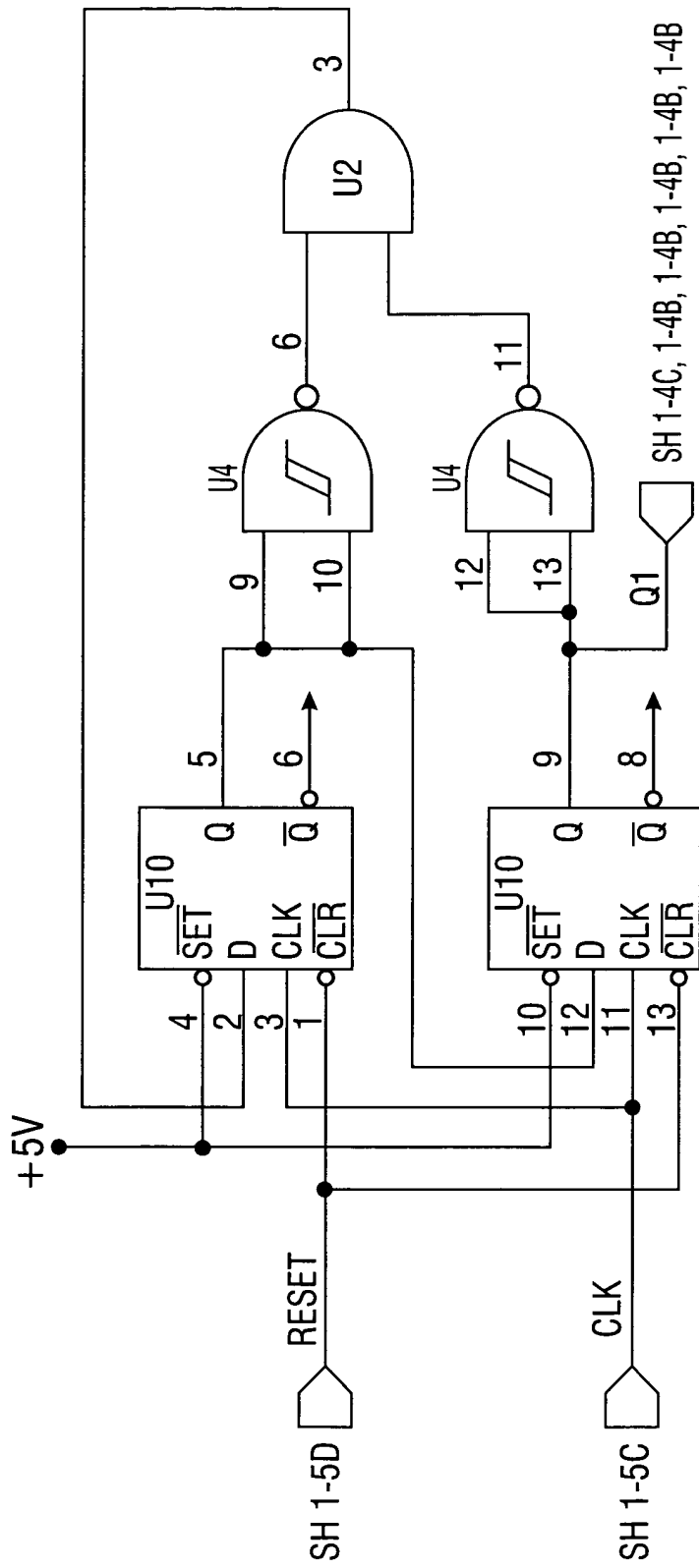


FIG. 38F



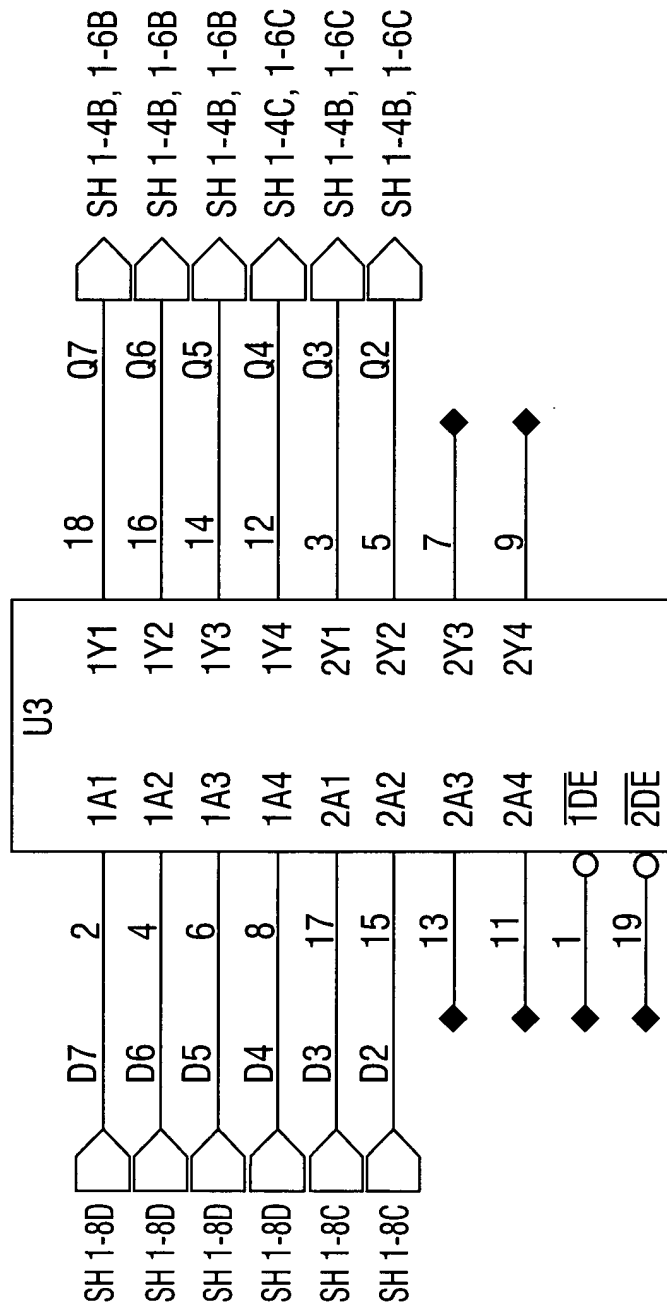


FIG. 38G

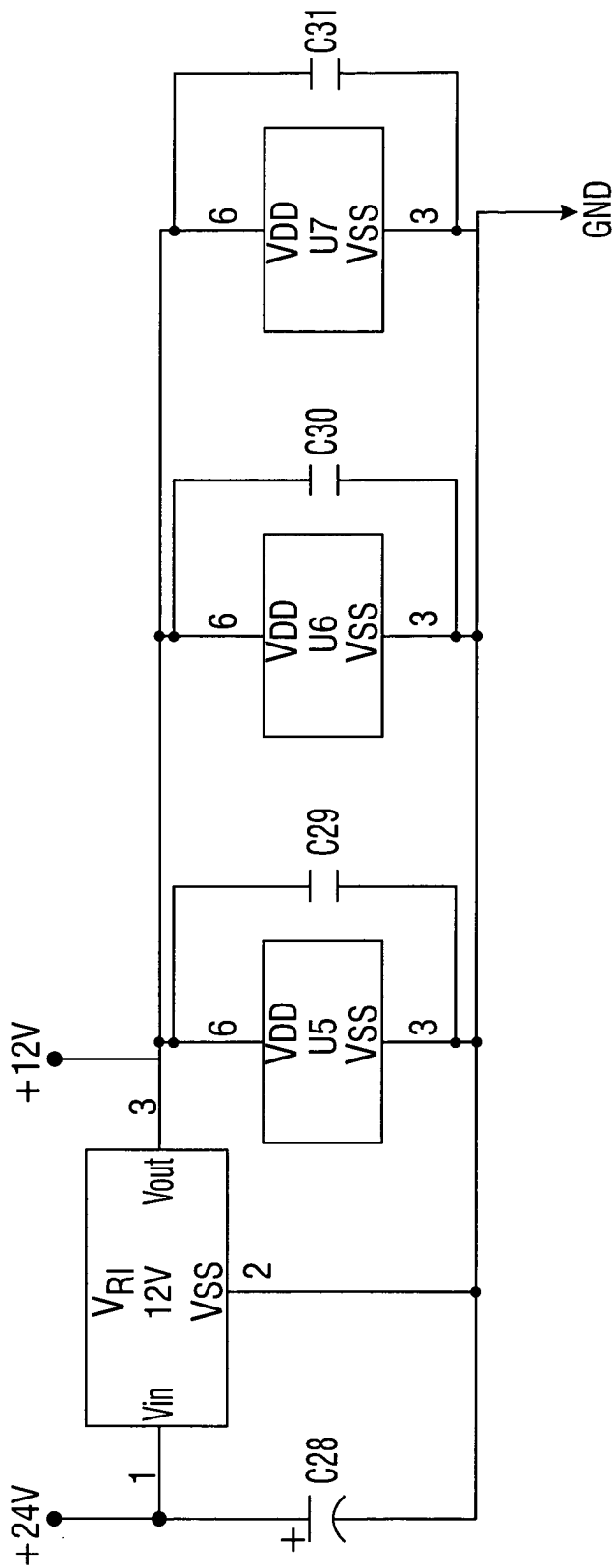


FIG. 38H



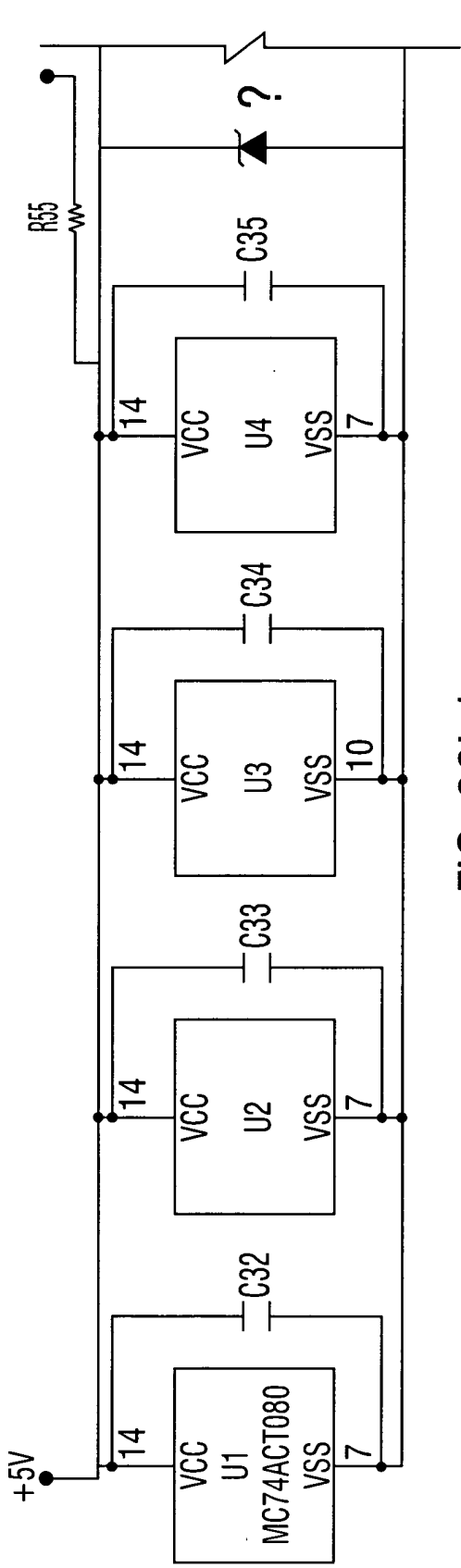


FIG. 38I-1

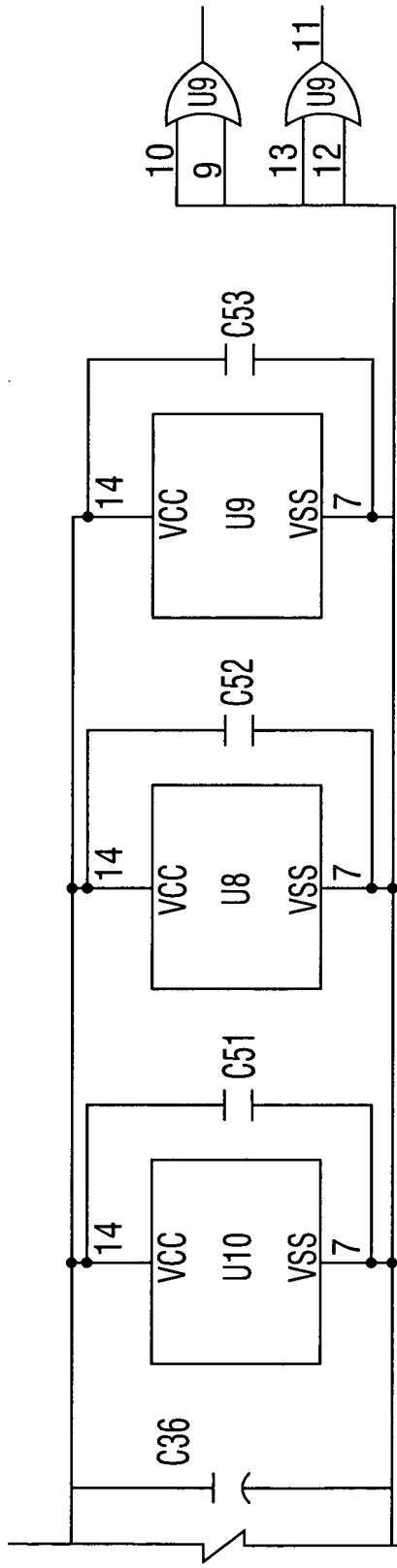


FIG. 38I-2



